

F1 LOTUS CELEBRATION AND TOP 10 CARS

AUTOSPORT

BRITAIN'S BEST MOTORSPORT WEEKLY

7 OCTOBER 2021

McLAREN'S PLAN **TO BEAT MERCEDES** **AND RED BULL**

How famous F1 team has bounced back
and why it can challenge for a title

**'I'm convinced we have
everything in place to
get back to the front'**

ANDREAS SEIDL

FREE
28-PAGE
ENGINEERING
SUPPLEMENT



PLUS

Marquez back on top in **MotoGP**

Evans flies to **Rally Finland** victory



Product of the environment

When polar ice melts, it harms habitats as far away as Asia and Africa. In 2022, conservationist (and Christopher Ward Challenger) Tom Hicks will lead an expedition to the North Pole to measure ice melt rates for the David Shepherd Wildlife Foundation (DSWF). On his wrist will be the C60 Anthropocene GMT. Able to monitor two time zones at once, waterproof to 600m and with a sapphire dial that recalls polar ice, it can withstand whatever the Arctic throws at it. And with five percent from the sale of each watch going to DSWF, it's playing its own part in the fight against climate change.



**Christopher
Ward**

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The different stories of two of Formula 1's legendary names

Last week we celebrated Lewis Hamilton's 100th Formula 1 victory. In this issue we look at two great F1 constructors: McLaren and Lotus.

McLaren is second only to Ferrari in terms of world championship race victories, and it was painful to see the Woking team fall so far after 2012. The recovery has been under way for a while and the brilliant 1-2 at Monza, not to mention Lando Norris's near-miss at Sochi, shows that the team is now ready to fight at the front.

Andreas Seidl has to take some of the credit for McLaren's changing fortunes and the team principal talks about his approach – and his confidence for the future – in our cover feature on page 18.

Lotus has long since fallen out of F1, where it was almost certainly the championship's greatest innovator under founder Colin Chapman. It's 60 years this week since Innes Ireland scored the team's (as opposed to marque's) first world championship grand prix victory, so we've taken a look back at Lotus's time in F1 (p26) and been bold enough to select the top 10 Lotus F1 cars (p30) – it's a list we will be discussing with Chapman's son Clive in an upcoming Autosport podcast.

Perhaps the most impressive performance over the past week was that of Elfyn Evans on Rally Finland. The Toyota driver has been a strong performer for some time now, but the speed he showed on one of the World Rally Championship's greatest events suggests he has really raised his game for this year's title contest.



Kevin Turner

Kevin Turner
Chief Editor

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NEXT WEEK
14 OCTOBER

Turkish Grand Prix
All the action from the latest F1 bout, plus the BTCC at Donington

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FREE WITH THIS ISSUE



ENGINEERING SUPPLEMENT

A farewell to the BMW M6 GT3 racer, a look at the arrival of the BTCC's new hybrid, and the next NASCAR era feature in our latest free supplement.

World Touring Car Championship was most recent high-level car racing at the Losail circuit



QATAR GETS 10-YEAR F1 DEAL TO RUN FROM 2023

FORMULA 1

Formula 1 has completed a 10-year deal with the Middle East state of Qatar to host a grand prix from 2023-32, and as a prelude to that the inaugural Qatar Grand Prix for cars will fill the vacant slot on the 2021 calendar in November.

The night race at Losail International Circuit, which forms a triple-header with Mexico and Brazil and takes place on 19-21 November, has been in the planning stages for months, but the announcement was delayed until the commercial arrangements were finalised.

Those negotiations led to a long-term deal to run an event in Qatar for 10 years from 2023 to 2032. There will be no grand prix in 2022 because the country will focus on hosting the FIFA World Cup. The event will return in 2023 at a yet-to-be-confirmed venue, with a new circuit now in the planning stages.

In a statement, F1 noted: "There was a strong will from Qatar to be helpful to F1, and in the course of this process, the vision for a longer partnership was discussed and agreed for 10 years. The step

from the gesture to be helpful to F1 in 2021 to a long-term strategy was short and simple and the vision for F1 to be the showcase for Qatar after the FIFA World Cup in 2022 was the driving force behind this long-term agreement.

"As part of the longer-term deal, discussions will continue regarding the location for the grand prix from 2023, with further details to be provided at a later time."

Qatar becomes the championship's fourth venue in the lucrative Middle East, joining Bahrain, Abu Dhabi and Saudi Arabia. The move reflects F1's increasing reliance on the region for funding, as well as Qatar's desire to build on the exposure created by the World Cup.

F1 CEO Stefano Domenicali said the entire championship can be "proud" of being able to put together a 22-race calendar in 2021 amid the COVID-19 pandemic, and is delighted to secure a long-term agreement with Qatar from 2023.

"We are very pleased to welcome Qatar to the Formula 1 calendar this season and for the longer term from 2023," Domenicali said. "The Qatar Motor & Motorcycle Federation and

Authorities have been incredible and have moved at great speed to ensure the race can take place this season at the Losail Circuit, famous to many as the host of MotoGP.

"We have shown that we can continue to adapt, and there is huge interest in our sport and the hope from many locations to have a grand prix. The huge effort from all the teams, F1 and the FIA has made it possible to deliver a 22-race calendar, something that is very impressive during a challenging year and something we can all be proud of."

Losail first emerged as a potential venue as long ago as June after other flyaway races were cancelled amid the ongoing restrictions enforced by the COVID-19 pandemic.

Essentially, F1 began to review circuits outside Europe that have an FIA Grade 1 licence and that would potentially be candidates for a race in logistical and commercial terms.

Opened in 2004, Losail has been a permanent fixture on the MotoGP schedule ever since. Lighting was added to the venue in 2007, creating MotoGP's first night event. It has only rarely been used for top-level car racing. A round of the GP2 Asia



TURKISH GP CIRCUIT'S GRIP TREATMENT

FORMULA 1

The Istanbul Park circuit has been water-blasted as part of a range of work ahead of this weekend's Turkish Grand Prix to provide more grip.

Having not been used for F1 since 2011, the track was resurfaced in 2020 as part of the preparations for the championship's return last year. But the work was completed only a couple of weeks before the race and drivers struggled for grip with Pirelli's hardest dry tyre compounds. The problem was exacerbated by the heavy rain that hit qualifying and the race.

Many drivers were critical of the track, with world



champion Lewis Hamilton describing it as "terrifying".

FIA race director Michael Masi recently informed the F1 teams that, as part of a package of updates, "the entire track surface has been treated to increase the grip level", on top of the usual ageing of the surface.

"The surface in Turkey has been effectively

water-blasted, would probably be the best way to put it, which is a regular treatment that happens," said Masi. "We have seen that regularly used in Singapore, where the public roads that are used they resurface quite regularly.

"I think it was just matter of timing last year."

ADAM COOPER



SUTTON/MOTORSPORTIMAGES

series was held in February 2009, with the two races won by Sergio Perez and Nico Hulkenberg, while the Grand Prix Masters series for retired F1 drivers visited in 2006, with Nigel Mansell victorious. Three rounds of the World Touring Car Championship were held at the track between 2015 and 2017.

FIA race director Michael Masi and F1 sporting director Steve Nielsen visited the venue after August's Hungarian GP in order to assess what changes would be required for F1. The list included a revised pit entry and modifications to some kerbs and barriers, as well as new team hospitality buildings in the paddock. That work has been undertaken in recent weeks.

Perez, the only current F1 driver to have raced at Losail, said: "I hardly remember it. It was very smooth, because it was done for MotoGP. I think it will be a good place."

ADAM COOPER



HONE
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Norris: new car worse to drive

FORMULA 1

Lando Norris says his early impression from the McLaren simulator is that Formula 1's 2022 ground-effect machinery will be worse to drive than the current cars.

Speaking at the launch of his new LN Racing kart, Norris said: "It's a very different car to drive, in a way not as nice as this season. But hopefully that's the case with every other team. There's no point trying to think it's amazing or terrible. You just have to do the best job you can and hopefully, next season, we go to the pre-season test with a good car."

Norris said McLaren has not got as far as manufacturing yet, with the drawings he has seen regularly changing as his team learns more about the new regulations. "The car we have in the factory, it's not even a car," he said. "It's a drawing and some paper. I don't think we will see it for many more months, maybe not until next year. Every week it's very easy to make changes and make it quicker and quicker."

Simulator work will be critical for teams with the new cars, since testing will be restricted to just two weeks.

JONATHAN NOBLE

P18 MCLAREN'S REVIVAL



Lynn joins Cadillac as it plots WEC programme for 2023

LE MANS/WEC/IMSA

Formula E refugee Alex Lynn has signed a long-term contract with Chip Ganassi Racing's Cadillac sportscar squad that is set to take him full-time in the World Endurance Championship in 2023. The Briton will race a Caddy Daytona Prototype international in the IMSA SportsCar Championship next season ahead of the team's projected move into the WEC when the marque's new LMDh prototype comes on stream the year after.

Lynn is known to have agreed the deal with Chip Ganassi Racing, but so far all the parties involved have declined to comment. Driver and team, as well as Cadillac, are staying tight-lipped about their plans for next year and beyond.

Lynn will be part of an expanded IMSA programme from Ganassi, which will field two Cadillac DPi-V.Rs next season rather than this year's single car. Sebastien Bourdais is also known to have agreed to return to a team with which he took GTE Pro honours at the Le Mans 24 Hours driving a Ford GT in 2016.

Renger van der Zande looks certain to stay with the team into the new season, while two-time overall Le Mans winner Earl Bamber is expected to take the final full-time IMSA seat for 2022. Van der Zande's current co-driver, Peugeot-contracted Kevin Magnussen, will not be a full-timer with the team in a year when the French manufacturer begins racing in the WEC with its new 9X8 Le Mans Hypercar.

Lynn has already raced a Cadillac DPi

in IMSA: he won the 2017 Sebring 12 Hours with Wayne Taylor Racing (above) on his only appearance in the series so far. He is also managed by Dario Franchitti, who took two of his three Indy 500 victories with Ganassi.

Lynn, who has lost his seat at the Mahindra Formula E team to Oliver Rowland, outlined a desire to move into the prototype ranks after leaving Aston Martin last winter. He was on the manufacturer's books for the WEC in 2018-20, but opted not to stay after the end of its GTE Pro campaign.

Ganassi formulated its line-up for next year after a test at Road America in August at which Lynn, Bourdais and Bamber all tested. Oliver Askew, who has raced irregularly in the IndyCar Series this year, is also known to have been part of the test.

Cadillac has yet to lay out its plans for its move into the WEC with the LMDh it is developing in conjunction with Dallara. The General Motors marque announced in August that it intended to race both in IMSA and the WEC with its new prototype, and revealed that Ganassi and Action Express Racing would remain on its roster. Action Express subsequently spoke up and said it was looking forward to continuing in IMSA into the new era, but Ganassi has so far remained silent on its plans.

Ganassi competed at the Le Mans round of the WEC in 2016-19. Ford's full-time WEC team raced under the Ganassi banner, but was in fact an operation run by Multimatic, which developed the road and race versions of the GT.

GARY WATKINS

Milesi joins Ogier for Toyota test

WORLD ENDURANCE CHAMPIONSHIP

Le Mans 24 Hours class winner Charles Milesi will get the chance to test Toyota's new Le Mans Hypercar next month. The Frenchman, who claimed LMP2 honours with WRT in August, will drive a GR010 HYBRID in the official World Endurance Championship rookie test at the Bahrain International Circuit the day after the series finale in early November.

Ex-Super Formula driver Milesi (below) has been nominated to take part in the test by the WEC organisation along with Laurents Horr. The German, who won the LMP3 class in the Le Mans Cup on the European Le Mans Series undercard in 2019 and 2020, will drive a GTE car from whichever manufacturer – Porsche or Ferrari – wins the GTE Pro title.

Horr, who is racing in P3 in the ELMS this season and has also contested selected IMSA SportsCar Championship rounds in North America, has already raced in the WEC. The 24-year-old competed in the Austin and Spa rounds of the 2019-20 series with the Project 1 Porsche GTE Am squad.

Seven-time World Rally champion Sebastien Ogier will take part in the test with Toyota. His presence has yet to be formally announced, but he will test a GR010 as he plots his future beyond his full-time participation in the WRC.

Milesi and Horr are scheduled to get a minimum of 30 laps in their respective mounts at the test on 7 November.

Ogier has revealed a willingness to race in one of the other classes of the WEC as he moves towards fulfilling his ambition of racing at Le Mans. "I will be open to make any step to progress if it's needed," he said. "I don't expect to jump in this WEC car and be the best; you have to be realistic."

GARY WATKINS



Detroit race back into city

INDYCAR SERIES

Detroit Grand Prix organisers are hoping to shift their race from the parkland at Belle Isle to a new downtown layout for 2023. The proposed course would use one of the straights from Motown's original Formula 1 and CART Indycar venue, which was active from 1982 to 1991.

Bud Denker, president of Detroit GP owner Penske Corp, made a presentation last week to local council members. According to a spokesperson for Penske, the idea is to "create more of a connection with the city, to provide more energy, be more inclusive and to get the local residents more energised about the event".

The GP organisers' current agreement for Belle Isle is valid through 2022, and there is an option to extend it until 2024, but Autosport understands that the plan to move off the man-made island and return to the city has been considered for some time. The success of IndyCar's new event in downtown Nashville and the festival atmosphere of Long Beach and St. Petersburg has prompted organisers to make the push before the next Belle Isle contract needs to be signed.

The Detroit Indycar race was first held on Belle Isle in 1992, but then-governing body CART let its contract lapse at the end of 2001. Roger Penske revived the race for



2007, but it ran for only two years before the global economic crisis took its toll. The event returned in 2012 and has been a fixture on the IndyCar schedule since, although it was one of several IndyCar and IMSA events that fell temporary victim to the COVID-19 pandemic in 2020.

TICKTUM IN FRAME AT CARLIN

Which driver – or drivers – will compete for Carlin in 2022 has become one of IndyCar's hot topics over the past couple of weeks. The team has been impressed with

Max Chilton's improvements in qualifying but knows he would benefit from having a team-mate, and senior personnel there believe that the squad's current F2 driver Dan Ticktum could be ideal.

Carlin commercial manager Stephanie Tindall said: "Dan would certainly make a great IndyCar driver. His natural talent is right up there, and I think he'd really relish the challenges it presents, in terms of all the different types of track we race on here. I think he'd really throw himself at it."

DAVID MALSHER-LOPEZ

Breen gets full-time M-Sport deal

WORLD RALLY CHAMPIONSHIP

Craig Breen is on his way from Hyundai to M-Sport's World Rally Championship attack next season at the start of a two-year deal with the British squad.

The Irishman has been heavily linked with the Cumbrian team this season, and confirmation of his and co-driver Paul Nagle's move was announced this week.

A chance for a full-time drive in M-Sport's all-new hybrid Ford Puma arrives after three years operating a part-time WRC programme with Hyundai. This season Breen has enjoyed

a career-best run of form, scoring three consecutive podiums, including second-place finishes in Estonia and Belgium and a third on last weekend's Rally Finland.

"I am so happy and proud to be joining the M-Sport Ford World Rally Team with Paul by my side," said Breen. "It has been a long road for us in the World Rally Championship with many twists and turns, but we have now been given a golden ticket to drive for the most prestigious marque in motorsport and fight for the World Rally Championship."

Breen is the first driver confirmed by M-Sport for 2022, although it is expected



that French talent Adrien Fourmaux, who has been developing the new Puma, will be retained for next season.

TOM HOWARD

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Rockenfeller exits Audi after 15-year stint



DTM

Mike Rockenfeller is leaving Audi after a 15-year stint with the German manufacturer that encompassed victory in the Le Mans 24 Hours and a DTM title. The 37-year-old announced that he will be leaving at the end of the current season after making it onto the podium in the first of the two DTM races at Hockenheim last weekend.

Rockenfeller explained that it is “time to move on and start a new chapter”. He explained that he has another drive lined up for 2022 without going into detail, but dropped heavy hints that he will be returning full-time to sportscar racing.

“Fifteen years is a long time and a lot of things have changed at Audi Sport,” he said. “Sometimes you realise you have different goals to the company. It’s not that I am unhappy with what I had at Audi, it’s just that I see no future. Everything comes to an end at some point.”

It remains unclear whether Rockenfeller could have moved over from the DTM to race Audi’s LMDh sportscar, which is scheduled to begin testing early next year. He revealed that a contract extension had “never really been discussed” as a result of his decision to move on.

Rockenfeller remained coy on what the future holds. “I already had something else

in line, but I cannot confirm anything,” he said. “I don’t know all the details myself, but I am very happy and relaxed.”

Rockenfeller hinted at dissatisfaction with the current Audi Sport regime with praise of former bosses Wolfgang Ullrich and Dieter Gass, without mention of current managing director Julius Seebach.

He listed his Le Mans win in 2010 with Timo Bernhard and Romain Dumas in the Audi R15-plus TDi as his “most emotional” success with Audi, but also stressed the importance of his 2013 DTM championship and his 2008 Le Mans Series title success alongside Alexandre Premat.

GARY WATKINS

Wallace takes landmark win as rain stops play

NASCAR

Bubba Wallace scored his maiden NASCAR Cup Series victory in a rain-delayed-and-shortened race at Talladega on Monday to become the first African-American to win a top-level NASCAR race since 1963.

The 188-lap race was postponed from Sunday due to the weather. After repeated rain interruption, NASCAR was forced to

bring out the red flag after 117 laps. When attempts to dry the track proved futile, Wallace was declared the winner, racking up the first win for the 23XI Toyota team co-founded by basketball legend Michael Jordan and Joe Gibbs Racing driver Denny Hamlin for this season.

Team Penske Ford drivers Brad Keselowski and Joey Logano scored useful points towards their Playoff tallies

by finishing second and third, ahead of Kurt Busch (Chip Ganassi Racing Chevrolet) and Playoff contender Christopher Bell (JGR Toyota).

Wallace moved to the head of the pack on a restart following a 98th-lap wreck, and defended against Keselowski and Logano. The pressure was relieved by another shunt and caution before the rain came down.

NICK DEGROOT





Ferrari shoots for IGTC crown

INTERCONTINENTAL GT CHALLENGE

Ferrari is getting serious about the Intercontinental GT Challenge. The Italian manufacturer is rolling out the big guns for the remaining rounds of this year's series with a full factory assault from AF Corse.

The Italian team will field a pair of Ferrari 488 GT3 Evos in the Indianapolis 8 Hours later this month and then the series-closing Kyalami 9 Hours in December. The move follows its last-gasp victory in the IGTC opener, the Spa 24 Hours in the summer, with the AF-supported Iron Lynx squad.

A Ferrari spokesman outlined a desire to try to win a series dominated by German manufacturers since its inception in 2016. "The IGTC title is something missing from our palmares and we want to see if we can put that right," he said. "We have tried to do it in the past, but this year we have been able to make it happen."

Ferrari will keep the winning line-up (above) from the 31 July-1 August Spa race together for the remainder of the three-round series. Factory drivers Alessandro Pier Guidi and Nicklas Nielsen will again share with AF-contracted Come Ledogar, who was also part of Ferrari's Le Mans

24 Hours GTE Pro line-up.

The second car will be raced by factory-contracted Antonio Fuoco, Ferrari Formula 1 test driver and IndyCar newcomer Callum Iott, and another AF racer in the form of Alessio Rovera. Fuoco and Iott shared the second Iron Lynx car at Spa with Davide Rigon, who suffered back injuries in the multi-car accident at Eau Rouge early in the race.

The attack will be supported by Belgian Ferrari dealer Garage Francorchamps. Its sporting arm, Ecurie Francorchamps, was a successful privateer Ferrari entrant from the early 1950s to the late 1970s, competing in both Formula 1 and sportscars.

Pier Guidi, Nielsen and Ledogar lead the IGTC points after Spa, while Ferrari lies second in the manufacturers' standings to Audi. Each marque's top three nominated cars score points at Spa, while it is two from four at other rounds.

The IGTC has been cut from five to three rounds for 2021 after the cancellation of the Bathurst 12 Hours set for February and the Suzuka 10 Hours scheduled for August because of restrictions on international travel resulting from the COVID pandemic.

GARY WATKINS

IN THE HEADLINES

TAYLOR-SMITH STAYING ON

British Touring Car Championship race winner Aron Taylor-Smith will remain at the Team Hard Cupra squad for 2022 in what has been described as 'a multi-year contract'. It means that the Irishman will continue alongside Jack Goff into a second season following a three-year BTCC absence spent primarily in GT racing. His best result of 2021 has been an 11th in the opening round at Thruxton.

FINLAND GETS WRC SLOT

Rally Finland, one of the blue-riband World Rally Championship events, has secured its place on the schedule for 2022 and 2023. The rally was omitted from the partial nine-round 2022 calendar released in July, and was one of six events – including New Zealand and Northern Ireland – vying for four remaining slots.

LOUBET OUT FOR SEASON

WRC regular Pierre-Louis Loubet will sit out the remainder of the 2021 season after breaking his hip when he was hit by a car. The Frenchman has been driving for Hyundai's satellite 2C Competition squad, sharing the car with Oliver Solberg. "Believe me, I think I'm lucky getting out with a simple broken hip," said Loubet.

CIESLA PROMOTED

Former WRC promoter Oliver Ciesla has been promoted to the role of chief executive officer of Autosport parent company Motorsport Network. Ciesla, who joined us in 2020 overseeing the racing division and has served as chief operating officer, will oversee the company's global strategy.



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you can follow us on facebook [facebook.com/superformanceukltd](https://www.facebook.com/superformanceukltd)





DTM TROPHY The all-British fight for the DTM Trophy title continued last weekend at Hockenheim. Although Ben Green won both races on the road in his BMW M4 GT4 (pictured), William Tregurtha closed the points gap to three going into this weekend's Norisring finale in his Mercedes-AMG GT4. Green led race one all the way, but a 30-second penalty for dropping too far behind the safety car promoted BMW-driving 16-year-old Theo Oeverhaus to victory and Tregurtha to second, with Green ninth. Green recovered from slipping to third early on to win the second race, with Tregurtha charging to second after being tapped into a spin. **Photograph by DTM Trophy**

Japanese field at full strength

SUPER FORMULA

The Super Formula grid will at full strength for next week's penultimate round at Motegi thanks to the easing of Japan's strict immigration rules amid the COVID crisis.

Ex-Renault F1 junior Sacha Fenestraz has missed the first five rounds of the season owing to visa problems, but has now been allowed into the country in time to tackle the last two races with Kondo Racing, where Yuichi Nakayama has been subbing. Franco-Argentinian Fenestraz (pictured) is also set to contest the final part of the Super GT season for TOM'S alongside Ryo Hirakawa, starting this month at Autopolis.

Meanwhile, Toyota WEC regulars Kamui Kobayashi and Kazuki Nakajima will make their first and second SF appearances of the year respectively at Motegi. Both were forced to miss the past four races owing to a combination of their WEC commitments and Japan's mandatory 14-day quarantine rule, with KCMG driver Kobayashi also forgoing the Fuji season opener in favour of an outing in the Sebring 12 Hours.

Nakajima raced at Fuji but has been missing from the grid ever since, with ex-Formula 2 racer Giuliano Alesi filling in for the two-time champion at TOM'S and picking up a win in a rain-shortened Autopolis race in May.

Alesi will focus on Super Formula

Lights, where he is runner-up in the points with TOM'S, at Motegi. But he is likely to return to SF for the Suzuka season finale later in the month, because it clashes with the first of the Bahrain WEC rounds.

Tatiana Calderon also rejoins the SF grid for the first time since April's second round at Suzuka and is set to see out the season with the one-car Drago Corse team.

Team Mugen driver Tomoki Nojiri goes into Motegi on the verge of winning the title following his win at the same track in August. Second place would be enough to put the crown beyond reach of his nearest rival, fellow Honda man Toshiaki Oyu.

JAMIE KLEIN



IN THE HEADLINES

McLAUGHLIN: BATHURST OFF

IndyCar rookie star Scott McLaughlin's bid to return to the Australian Supercars scene at the Bathurst 1000 has been called off. The Kiwi's off-season programme with Team Penske means he cannot enter Australia due to the country's COVID-19 quarantine requirements. The Dick Johnson Racing Ford team has therefore called up Alex Davison to join his brother Will, with Tony D'Alberto joining Anton De Pasquale in the sister car.

BEREAVED VINALES SITS OUT

Aprilia MotoGP rider Maverick Vinales sat out last weekend's US round at Circuit of The Americas, following the death of his 15-year-old cousin Dean Berta Vinales in a racing crash at Jerez a few days earlier. Aprilia offered its "unconditional support" to Vinales in the wake of his decision.

AHMED ON PODIUM IN US

Ex-British Formula 3 champion Enaam Ahmed returned to the Indy Pro 2000 ranks for last weekend's season finale at Mid-Ohio, and took a second place. Ahmed, who started the season with RP Motorsport, joined Juncos Hollinger Racing for the event. He led the second race before getting pipped by Irishman James Roe. Dane Christian Rasmussen wrapped up the title and the Indy Lights scholarship that goes with it.

BEARMAN POINTS LEAD CUT

Aston Martin Autosport BRDC Young Driver of the Year finalist Ollie Bearman's German Formula 4 points lead was cut last weekend at the Sachsenring by main rival Tim Tramnitz, who scored two wins. Tramnitz beat Bearman in the first race, and passed early leader Luke Browning to win the second, with Bearman fourth. Vlad Lomko emerged atop a battle with Bearman for victory in the reversed-grid finale.

ROSENQVIST IN A PORSCHE

IndyCar race winner Felix Rosenqvist returned to his native Sweden last weekend to contest the Carrera Cup Scandinavia finale at Mantorp Park. Rosenqvist claimed a pole, plus second and third in the races, both of which were won by champion Lukas Sundahl. Also on the bill was the penultimate TCR Scandinavia round, in which Robert Dahlgren clinched the title in a PWR Racing Cupra.



Racing in winter

For trackday drivers considering a move into racing, a common question is ‘where should I start?’ With so many different avenues to choose from, knowing what path to take can be confusing. Prolific trackday organiser Gedlich Racing, the promoter of the ‘Endless Summer’ events at circuits across the Iberian Peninsula during the traditional ‘off-season’, has thought long and hard about this problem and responded with the GT Winter Series, which is now entering its third season.

Open to all levels of competitor, from true amateurs to professionals, the championship is staged around the existing infrastructure of Endless Summer trackdays, allowing drivers learning the ropes on track to test their skills in a race environment when competitive motorsport in Europe traditionally comes to a halt.

Putting the emphasis on staging friendly yet professional events across Formula 1-standard venues, which this season includes Portimao, Estoril, Jerez and Barcelona, the series run by Markus Gedlich’s dedicated team enjoyed a strong 2020-21 campaign aided by a Balance of Performance to keep the racing fair.

The championship was won by Zakspeed Mercedes GT4 crew Robert Haub (USA) and Gabriela Jilkova (Czech Republic), who used the events as



preparation for their season in ADAC GT4. But despite its name, the GT Winter Series is open to a wide range of sportscars from LMP3 and CN-spec prototypes to GT3 and Porsche Cup cars, with points calculated on the results achieved across two 25-minute sprint races and a 45-minute endurance race within different classes.

This year, it will incorporate a separate class for BMW M2 Cup cars, as a complement to the existing Cups of Germany, Benelux and Italy during the regular European season, as usual supported by Goodyear.

Interested drivers can book up to 28 days of testing across six venues, in addition to GT Winter Series races, with coaching available from top GT drivers including Nurburgring 24 Hours podium-finisher Nico Bastian.

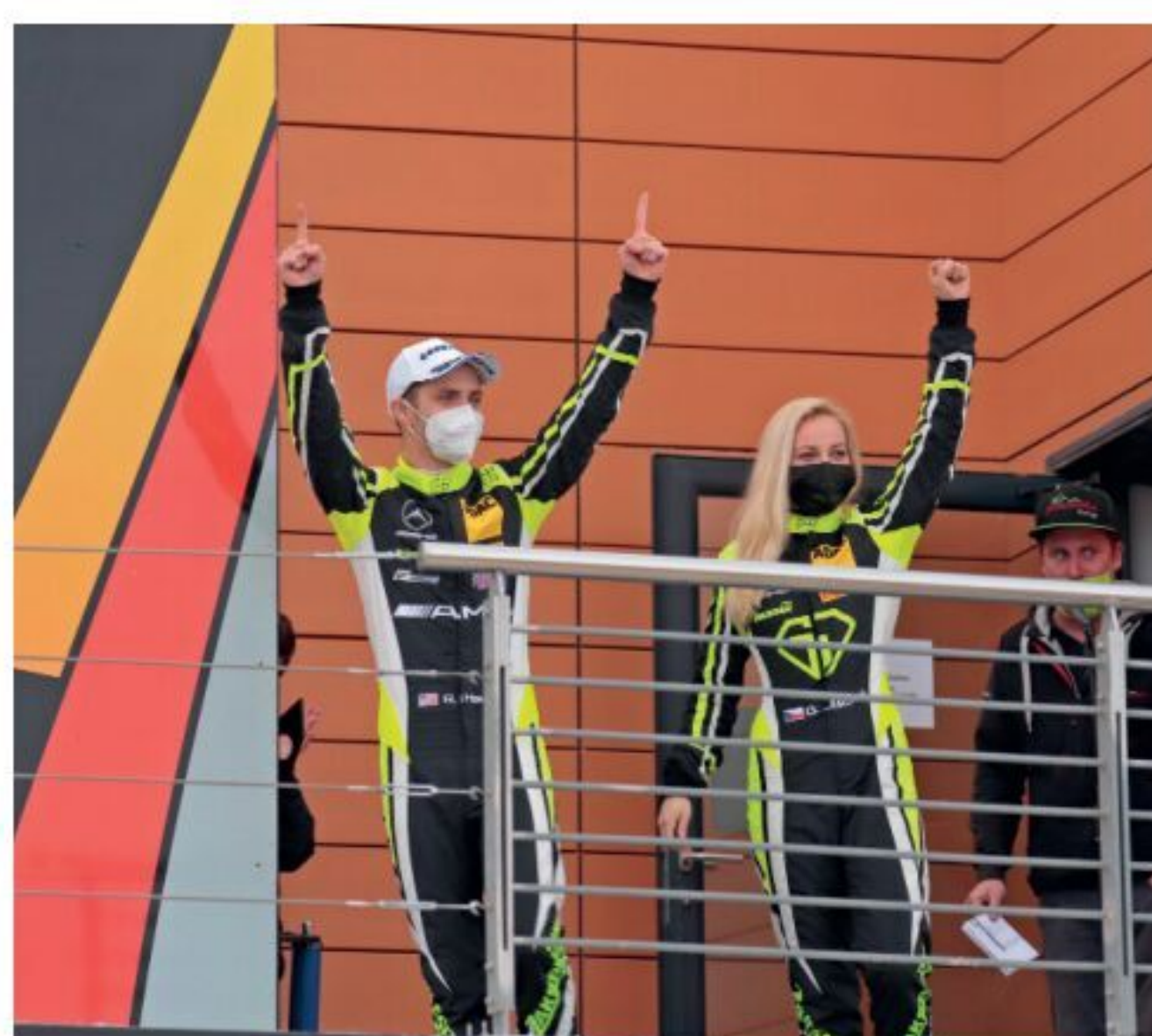
“We are very happy that the GT Winter Series hits the nerve of the racers, especially with the combination of test days and races,” says Gedlich.

2021-22 GT WINTER SERIES CALENDAR

DATE	TRACK
11/12 Dec 2021	Portimao
15/16 Jan 2022	Estoril
12/13 Feb 2022	Jerez
tba Mar 2022	Barcelona

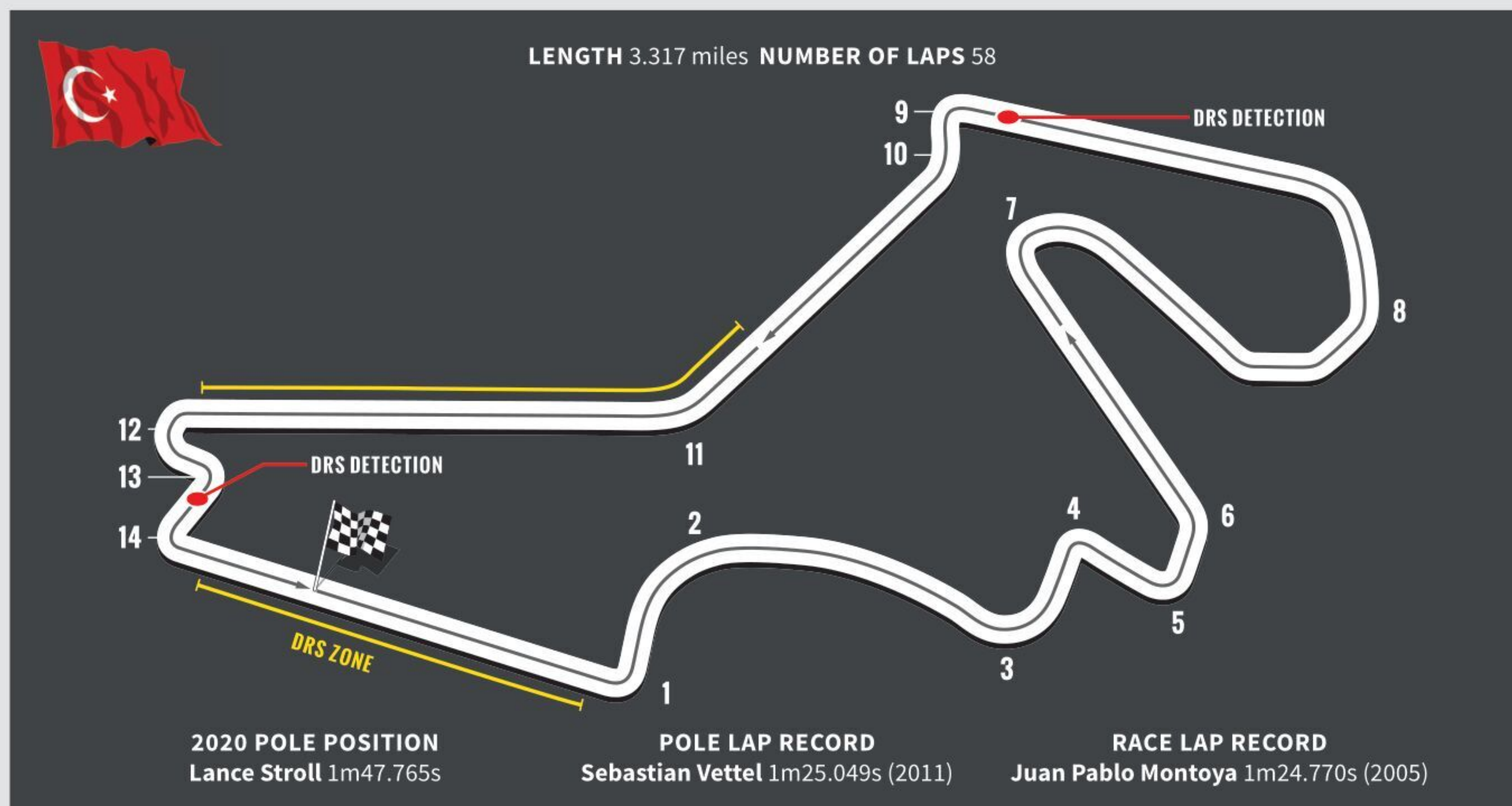
“The fun factor is extremely high at the GTWS, especially as we race at particularly great locations at a time of year when it’s rather uncomfortable in the rest of Europe.”

If you want to dip a toe into the water and get started on your racing journey at prestigious F1-standard venues, then look no further.



FOR MORE INFORMATION, VISIT [GT-WINTER-SERIES.COM/EN/](https://gt-winter-series.com/en/)

F1 TURKISH GRAND PRIX PREVIEW



UK START TIMES

Friday 8 October

FP1 0930 FP2 1300

Saturday 9 October

FP3 1000

QUALIFYING 1300

Sunday 10 October

RACE 1300

CATCH THE RACE LIVE

SKY SPORTS F1

BBC RADIO 5 LIVE

HIGHLIGHTS

CHANNEL 4 1830

TYRE ALLOCATION



CHAMPIONSHIP POSITIONS

Drivers

1	Hamilton	246.5
2	Verstappen	244.5
3	Bottas	151
4	Norris	139
5	Perez	120

Constructors

1	Mercedes	397.5
2	Red Bull	364.5
3	McLaren	234
4	Ferrari	216.5
5	Alpine	103



RACE STATS

Previous winners

2020	Lewis Hamilton	Mercedes
2011	Sebastian Vettel	Red Bull
2010	Lewis Hamilton	McLaren
2009	Jenson Button	Brawn
2008	Felipe Massa	Ferrari
2007	Felipe Massa	Ferrari
2006	Felipe Massa	Ferrari
2005	Kimi Raikkonen	McLaren



Best results

Hamilton	1st x 2
Raikkonen	1st x 1
Vettel	1st x 1
Alonso	2nd x 2
Perez	2nd x 1
Leclerc	4th x 1
Sainz	5th x 1
Verstappen	6th x 1
Norris	8th x 1
Stroll	9th x 1

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Fluid dynamics



F1 2021's final countdown

Seven rounds remain in this record-breaking season. Which venues are likely to play to the strengths — or punish the weaknesses — of Red Bull and Mercedes?

ALEX KALINAUCKAS

The 2021 Formula 1 season is rather different to the previous four campaigns. Not since Nico Rosberg headed to Malaysia with an eight-point lead over Lewis Hamilton has a title fight been as hard-fought at this stage of the season as the two-point difference between the Briton and Max Verstappen right now.

There are other differences to previous championships as things stand in 2021. Compared to 'normal' years in 2016-19, the current campaign still has a lot of ground to cover. Seven races, in fact, as F1 heads for a record-breaking season length now that Qatar has been confirmed as Australia's replacement.

The run-in also has a rather different look compared to previous 'normal' campaigns, with the upcoming race in Turkey back for a second year. Plus, Qatar's arrival — set to be for just a single year at the Losail track before a new circuit is built for the event's post-football World Cup return in 2023 — and the new race in Saudi Arabia. But it's still possible to thread the 2021 form book through the final schedule and assess which venues might favour one of the title protagonists over the other.

This weekend is the Turkish Grand Prix, where Hamilton took a famous win to seal his seventh world title a year ago. He was magnificent in the wet race but struggled on the gripless track surface in qualifying (where the oily circuit had perplexed Mercedes even in the dry practice) and registered his worst

“Perhaps the biggest factor that could impact the outcome of this super-close season is reliability”

qualifying result of the season. Verstappen arguably should have taken pole but didn't, and then spun away his shot at winning the race. The Istanbul Park surface has been water-blasted to make it rougher and therefore improve grip ahead of this weekend's race, while Pirelli has also brought tyres one compound step softer (C2-C4). Mercedes must hope these differences will cure the tyre warm-up problems it encountered in 2020. The problem facing the team is that Red Bull is much faster in 2021 overall, and the tyre warm-up issue has been costly at other events earlier in the year (such as Monaco and Baku).

The following round at Austin is firm Hamilton and Mercedes territory historically. Hamilton has won there five times from eight races (once for McLaren, four times with Mercedes) and Valtteri Bottas took victory in 2019, but Red Bull has been able to shake

Mercedes' strongholds at Paul Ricard and Silverstone already in 2021. The Texas track's combination of fast and flowing first sector, plus long back straight — similar to the French and British venues — might just give Red Bull an edge. That said, Mercedes' Silverstone update has brought it closer on chassis performance in the high-speed stuff where Red Bull excels.

Mexico City and Interlagos have been firm Red Bull tracks in the pre-2020 years, with their high-altitude settings typically favouring Honda's jet-engine-inspired power unit. The much thinner air at the former venue may also benefit Red Bull further as drag will be less of a consideration to trim out. The absence of these races gave Mercedes an even simpler task to crush its opposition with the dominant W11 a year ago.

Qatar will be the biggest unknown, but its lack of very high-speed turns means Red Bull's biggest strength may be somewhat blunted. The team's Baku form, however, should bode well for Jeddah's fast, street-track setting once December arrives, although the course's run of small turns might yet spring a few surprises Mercedes can seize upon. And there's the performance of the tyres to consider on such a demanding layout, as Verstappen discovered to his cost in Baku.

Abu Dhabi will be different this time around, with changes being made at the Yas Marina layout to improve overtaking. This is very much a welcome move given the tedious events the track previously produced, even if there is still doubt about how effective the changes will be. But Red Bull can look back with confidence on Verstappen's 2020 domination of the season finale, where Mercedes again struggled to get the soft tyres to work ideally.

But perhaps the biggest factor that could yet impact the outcome of this super-close season (any performance gaps at the remaining seven races should be pretty small, whichever team is on top) is reliability. Mercedes faces serious concerns over Hamilton's remaining engine pool after the fresh unit Bottas took at Monza had to be removed and inspected when a problem was discovered in Sochi. “We're having a few balls in the air, because you need to have the right balance between making sure that you really sort out all the gremlins that you have in the power unit, not only for this year but also for next year's power unit,” said team boss Toto Wolff.

So, it's far from a given that Hamilton won't at the very least have to take a grid penalty in a bid to avoid a repeat of the fiery Malaysian GP retirement that gave Rosberg the ultimately decisive 15-point boost heading away from that race in 2016...

Red Bull has already taken the grid penalty pain — last time out for Verstappen at Sochi. The late-race swing in the rain that meant the Dutchman rose to second ultimately minimised the impact of taking a fourth engine and ratcheted up the pressure of this intense title fight a step further. 🏁



Hauger's fightback to glory

After a disastrous 2020, Dennis Hauger began to doubt himself. But after regrouping, he stormed to the FIA Formula 3 title in 2021

MEGAN WHITE

It might look like the logical conclusion to an FIA Formula 3 Championship season – Prema Racing driver takes the crown, as happened in the previous two years – but 2021 could have gone very differently for Dennis Hauger. The plucky Norwegian dominated the season from the off, winning the opening feature race at Barcelona before taking second place in the following two rounds at Circuit Paul Ricard and the Red Bull Ring. He took pole position for three of the season's seven feature races, and scored four wins and five additional podiums on a charge to the title that ended with him finishing 26 points clear main rival Jack Doohan.

But Hauger had entered the season with dented confidence after suffering a torrid 2020 campaign, his rookie season in FIA F3, with Hitech Grand Prix. Off the back of a promising karting career, he joined Red Bull's junior team and finished fourth in the 2018 British Formula 4 Championship, before going on to win the Italian F4 title the following year, with 12 wins from 21 starts. He added a further six victories in German F4, where he was pipped to the title by Theo Pourchaire.

He therefore entered last year's COVID-delayed F3 season looking like a promising contender, but managed only one podium and finished in 17th place.

"In 2020 I wanted and I was expecting to be at the top,

"It took some time when I got into Prema's F3 car for testing to get my confidence back fully"

after winning almost everything in F4, so as a driver it was something I was aiming for," Hauger explains. "It was definitely a tough season. I had to live in the UK and with all those downs, weekend after weekend it made it tough mentally. I still think though that in some way it made me stronger, especially the mental game."

A late-season spell in the Carrera Cup Scandinavia and, most importantly, back with his old Italian/German F4 team Van Amersfoort Racing in the Formula Regional European Championship, helped him to reset, with three podiums in five races in the former, six podiums in eight races in the latter. "It was a bit of a shock after a season of downs to get into two cars I had never driven and do really well," he says. "It was a confidence boost and made me

wonder what happened in the main F3 season because I was quick in any other car I drove.

"It still took some time when I got into Prema's F3 car for testing before this season to get my confidence back fully and figure out that I never have to doubt my own abilities. I think we did well to have everything at 100% before the first race weekend of 2021 so we could get pole, it was really nice."

Hauger says that although he came into 2021 believing that he could win the championship – "as a driver, you have to believe that" – he was left questioning his ability by his season at Hitech.

"I think one of the things I started questioning myself was, 'What's happening? Am I good enough?' last year, and I think after that testing with Prema, working with Prema, I really learned mentally that I never have to doubt myself. Going into this season at the end of 2020, that was definitely the goal. I knew this was going to be an important year, so I was putting all the effort into the season."

That effort paid off. Highlights of the year include the opening weekend at Barcelona, where from pole he produced a lights-to-flag masterclass to take victory 3.7s ahead of Doohan, sparking their season-long tussle for the title. He also shone at the Red Bull Ring, winning a dramatic sprint race from 12th on the grid after a contest that featured four different leaders.

Of course, as Hauger says, his success can in part be credited to Prema. The Italian powerhouse has long dominated both F3 and FIA Formula 2, with previous F2 title winners including Ferrari Formula 1 star Charles Leclerc and 2020 champion Mick Schumacher. Team boss Rene Rosin credits the performances to hard work, and says the squad prides itself on being seen to do its best, adding that "when the competition is tougher is where we want to push more".

It's a good atmosphere at Prema too. After sealing the title in Sochi, Hauger said 2021 was "one of the funnest years I've had as well as the hardest, so I've enjoyed it a lot for sure". He added that he spent much of the year in Italy working with the team, with which he has a "good connection".

With his career back on track, Hauger's ascent looks set to continue into 2022. With Red Bull suggesting he has a Formula 2 seat secured, although it is currently unclear where that will be, it seems logical that his next step would be into current F2 series leader Oscar Piastri's Prema seat, assuming the Australian clinches the title.

And after that? With his steely determination and bags of talent, there's nothing stopping Hauger becoming the first Norwegian F1 driver in history. ✎

YOUR SAY

If F1 really wants to ensure spectators are properly entertained, why not fill the gaps in a GP weekend by allowing race organisers to showcase elements of local motorsport?

ANDREW NIMMO

Other ways to entertain the grand prix crowds

It took many years of fine tuning to arrive at a qualifying format that produces a truly climactic event on the eve of every grand prix. This is rendered irrelevant by putting on a sprint race to determine the eventual starting line-up. As I understand it, the idea was to spice up the show and introduce a degree of unpredictability.

If F1 really wants to ensure that spectators are properly entertained over the course of a GP weekend, why not fill the gaps in the weekend by allowing race organisers to showcase elements of their local motorsport – or is F1 worried about the possibility of being upstaged by the Caterhams, MX-5s or classic Minis?

Personally, I'd rather do away with qualifying and start each race in inverse order of the current championship positions, basing the first round on the previous year's final order, with rookies at the front in inverse order of their teams' previous year's result. That way, Mercedes and Red Bull would have to build cars that work in traffic as well – and we'd get plenty of overtaking.

Andrew Nimmo
Teddington

Norris's first F1 win just a matter of time

Well, a great drive from Lando Norris at the Russian Grand Prix, another good drive from George Russell, and 100 GP wins for Lewis Hamilton is a great achievement. On the flipside yet another desultory race from Valtteri Bottas – thinks, why has he been dropped by Mercedes?

Perhaps Lando's relative lack of experience caught him out, but full marks for a fantastic gamble which ultimately failed. It can only be a matter of time before he gets his first win, and it's good to see McLaren getting closer to the top teams.

Neil Davey
Newport, South Wales

Raikkonen will be missed when he retires

Oh, how we will miss Kimi Raikkonen in F1. I am so sad, as we will no longer experience his clarity of mind and brevity of communication. Like Niki Lauda, he has a wonderfully insightful mind providing communication without the waffle.



Remember, when he left Ferrari he wasn't negotiating for money, he was focused on Alfa Romeo's planned F1 development. The lack of chassis development in the past two years makes the prospect of the last two rows of the grid almost certain – who can blame him for retiring from journalists' and sponsors' demands?

Rod Harrap
Guisborough

Track limits seemingly ignored

The Silverstone National loop wasn't very good for the BTCC/TOCA racing, was it? And what on *Earth* was going on with the track limits at Copse? Many cars appeared to be running as wide as the car park at Whittlebury Hall, without any sanction.

Graeme Innes-Johnstone
Elland

Correction

Gordon Spice did not win the 1975 Oulton Park Gold Cup, as claimed in the 16 September issue. He did win a Formula 5000 race at Oulton Park that year, but the Gold Cup was won by David Purley in a Chevron B30.

HAVE YOUR SAY, GET IN TOUCH

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HOW McLAREN GOT BACK TO WINNING WAYS *AND WHAT COMES NEXT*

*The legendary F1 squad broke a nine-year drought at the Italian Grand Prix.
Team principal Andreas Seidl tells Autosport how things have been
turned around and why he's confident about the future*

ALEX KALINAUCKAS

PHOTOGRAPHY  **motorsport
IMAGES**





McLAREN'S BEST RACE
RESULT EACH SEASON

YEAR	RESULT (DRIVER: VENUE)
2012	1st (Hamilton: Montreal, Hungaroring, Monza, Austin; Button: Melbourne, Spa, Interlagos)
2013	4th (Button: Interlagos)
2014	2nd (Magnussen: Melbourne)
2015	5th (Alonso: Hungaroring)
2016	5th (Alonso: Monaco, Austin)
2017	6th (Alonso: Hungaroring)
2018	5th (Alonso: Melbourne)
2019	3rd (Sainz: Interlagos)
2020	2nd (Sainz: Monza)
2021	1st (Ricciardo: Monza)

"I'VE ALWAYS KIND OF FELT LIKE McLAREN IS STAR WARS. BUT WE BECAME A BIT DARTH VADER AND I THINK WE NEEDED TO BE A BIT MORE LUKE SKYWALKER"

The above quote is how McLaren CEO Zak Brown started 2021 — the words encapsulated the previous era his squad was still struggling to leave behind, while looking forward to the new hope of a brighter future. Now, as the current season heads into its concluding episodes, McLaren has very much stepped out of the dark side and is enjoying its time back in the light.

An apology: we're staying with *Star Wars* references for a while yet. This is because Brown was right — McLaren had gone a bit too Darth Vader in the years that preceded its shocking slide down the grid in the middle of the last decade. There was the vast, shiny new base — technologically impressive, but sterile and somewhat soulless. The factional infighting that caused those famous divisions in 2007, the 'Spygate' controversy that year too and the massive fine that followed, plus the later boardroom battles and leadership usurpation. The Formula 1 colours got ever darker, the sponsors disappeared, the results dried up.

McLaren started its journey back towards the light almost immediately after Brown took over as McLaren Technology Group executive director in late 2016. But while the cars were restyled with papaya orange in 2017, the force of change took longer to produce meaningful results. A second ninth-place finish in three years in the constructors' standings did become a step forward to sixth when Honda was traded for Renault power in 2018, but greater success took longer, and has only become truly magnificent in recent weeks.

McLaren returned to the podium (sort of) with Carlos Sainz Jr's third place at the 2019 Brazilian Grand Prix, although the Spaniard was not part of the official ceremony and inherited the position thanks to Lewis Hamilton's post-race penalty. And that is a key year in McLaren's transformation. That's because of the arrival of one figure heralded in the Luke Skywalker leadership Brown wanted. And, despite his

obvious youth and exuberance, it was not Lando Norris.

Andreas Seidl had been selected by Brown to run McLaren's F1 operation, his appointment ending a series of upper management changes at the team that had characterised the decade following 2007 and Ron Dennis's final fall from his position as McLaren supremo. It meant giving up an expected promotion to run Porsche's motorsport division — a factory programme steeped in legend, and following on from his successful leadership of the marque's LMP1 squad with the 919 Hybrid. Seidl had previously overseen BMW's DTM return in 2012, after working with the manufacturer's motorsport programme for six years from 2000, then becoming BMW Sauber's F1 head of track operations until 2009.

Seidl started at McLaren in May 2019, with the freedom and confidence from Brown and the McLaren shareholders to run the show as he saw fit. That meant addressing and understanding the historical problems that had led to McLaren's fall down the F1 grid, as well as learning where it was still playing catch-up to Mercedes and Red Bull.

"The most important thing was when I started to work out as quickly as possible, together with the team, where we simply have seen the deficits compared to what we thought is important in order to be a modern Formula 1 team able to fight at the front," says Seidl. "This process, it's simply important to be honest, transparent and to not hold back. Put everything on the table."

There were problems with resources — "There was simply a big lack of investment for a long time at McLaren, which just resulted in the situation that we were massively behind," says Seidl — that stemmed from the spy-scandal fine, as well as McLaren's disadvantageous payment terms compared to Mercedes, Red Bull and Ferrari in the 2013 Concorde Agreement. The latter played a key role in establishing an unofficial two-tier F1, which remains the case to this day, or at

least until the full impact of Liberty Media's cost-cap plan is felt.

From dominating F1 for parts of the 1980s and 1990s, plus leading the way with Ferrari in the 2000s, McLaren was a 'Class B' squad for much of the past decade. The resource squeeze was felt significantly in car performance terms, and Dennis's big move to rejoin forces with Honda backfired spectacularly — the difficulties the two parties encountered ultimately drove the engine manufacturer onto later success with Red Bull, once McLaren had let go.

Seidl needed to organise the team in a new way to transform its fortunes. He did that by arranging what he calls a "quite traditional [racing] organisation" reporting structure. After taking the





title of 'team principal' to reflect his desire for a team operation rooted in traditional successful motorsport operations, Seidl arranged a three-pronged leadership body aimed at simplifying McLaren's overall F1 structure. This had previously grown overly complex, famously with responsibilities for areas such as car design being shared by several people. The chosen trio were James Key (executive director, technical), Andrea Stella (executive director, racing) and Piers Thynne (executive director, operations), plus team manager Paul James.

"I strongly believe that in the competition we are in here in Formula 1, [the traditional organisational structure] is clearly the way forwards," says Seidl. "And there's also an important requirement – how the reporting lines look, that responsibilities are clear and also the accountability."

"What is really great and also fun for me is to see how much we are aligned between us four, in terms of the vision or the approach – how we want to get this team back to the front in Formula 1. They are also great leaders, leading their divisions not just from a technical perspective, but also in terms of the human side, which is very important for me."

After establishing McLaren's clear remaining deficits, Seidl and co pressed on with using new resources to make big infrastructure investments, such as the new windtunnel being built at the McLaren Technology Centre. They also opted to ditch the Renault engines that had been bought in to replace Honda and take Mercedes power from the start of 2021. That switch, which Seidl personally pushed hard for, was viewed as so pivotal that McLaren pressed on with making the change even through the pandemic-enforced car-design carryover requirements for 2021. This meant it was forced to spend its permitted development tokens adapting the MCL35M to fit the Mercedes engine.

"DESPITE ALL THE MONEY INVOLVED, DESPITE IT BEING VERY TECHNICAL, IT'S STILL A HUMAN SPORT"

But Seidl wasn't going to let development of the human side of McLaren's operations be addressed purely by trickledown impact from his leadership team. Together, they were to enact the transformation Brown desired – to make wholesale cultural changes across the squad to go from dark side to light.

"One reason why I like this sport so much is because in the end, despite all the money that is involved, despite the sport being very technical, it's still a human sport," Seidl explains. "And it's a team sport. You can only be successful as a result of a big team effort. We have the opportunity, being in sport, that we also use all these emotions – these ups and downs, which are normal and come with sport – as a possibility or opportunity to unlock a lot of additional potential from a team or from people."

"And that's what I've always tried in the last 20 years, within my people, the people around me or the people I was responsible for, to create this special spirit of a whole sports team."

"I'm not just talking about the two drivers here, who are obviously the heroes of this sport and who are very important in terms of getting this spirit inside the team. I'm also not just talking about the race team. I'm really talking about all the 850 people we have within the team, including the people back home in production, engineering, in finance, HR and so on. Because, from my point of view, if you manage all these people to feel part of a big sports team and see themselves also as athletes of the team, that's very important to go the extra mile each day, which is important if you want to compete at the front in Formula 1."

It's not hard to see the culture Mercedes has created during its incredible run of success since 2014 as a clear comparison. Toto Wolff has arranged his squad so that the feelings and situations its employees face are addressed or understood so that they can deliver >>



NO ADS. JUST MORE PERFORMANCE



Seidl stresses importance of involving entire team in celebrating success

their best when they go to work. If the best person for the job needs certain requirements, or wants to discuss difficulties they are facing in their personal lives, then the team works to assist them — ultimately for its benefit. And team culture means trusting staff to make mistakes within key freedoms, to try a range of ideas and not be discouraged if they go wrong, to know that their every effort is making a difference. Unity, something that often seemed lacking as McLaren dropped down F1's pecking order, is critical.

"To me, it is important to create a culture where people simply have fun going to work," says Seidl. "Because it's quite simple and straightforward — if you have fun going to work or if you wake up in the morning and know when you go to work that you enjoy it, that's key in order to deliver. In the end, we are what we are because of our people. And it's very important to have that focus and to make this investment.

"That's definitely something where we already made good steps forward in the last two years. It's also not an easy process — to change a culture of a big team with a big history, of a team that was also quite successful in the past, which also had to accept that success from the past doesn't help you today. There is no automatic mechanism that will give you the success from the past again.

"You need to create this ambition and this self-confidence that you can actually do it, which is especially tricky when you have bad years. At the same time, you need to be careful that it is the right amount of self-confidence and ambition, that it is not in an arrogant way. And I think that's where we invested a lot of energy.

"Another important thing is that I expect with my leadership team, and again with their people, that they feel empowered, that they know they have freedom and support in order to do things in a way that they think has to be done to be successful. Because that's how I grew up. In



Back in the big time: Ricciardo leads Verstappen in Italy



“IT’S QUITE STRAIGHTFORWARD – IF YOU HAVE FUN GOING TO WORK, THAT’S KEY IN ORDER TO DELIVER”

the last 20 years, I always had bosses that gave me this freedom and support, and that’s how I delivered and how I enjoyed work.

“I experienced the same again with Zak and the shareholders that put a lot of trust in me and in my team, and give me all the support I need, especially when it comes to resources. But at the same time, I have full freedom in order to bring in my style and my experience, which is obviously also very important for me. And, again, I try to live exactly the same thing in front of my team.”

McLaren’s cultural change could be seen, very positively, in the playful friendship Sainz and Norris formed during their two seasons as team-mates. The positivity has remained with Daniel Ricciardo coming on board (how could it not with such a perpetually smiling driver?), despite the Australian’s struggles to gel with the MCL35M (see page 24) and Norris vowing to be “less jokey” as his F1 career progressed.

Seidl encourages his drivers to show their personalities to the world, but also make sure they are familiar with the wider McLaren team. This hasn’t been easy of late thanks to the COVID-19 restrictions, although Ricciardo notes “thanks to video calls and group chats, we can still create relationships”. Team dinners are a regular feature on race weekends, while Norris “even sees people at the golf club” between events. The Briton also lives “three minutes or something away from the factory, so I am always in there”, getting to know the various divisions that build and operate McLaren’s F1 machinery. Both drivers insist McLaren is now, in Norris’s words, “one big family”.

“There’s no hierarchy or anything like that,” adds Ricciardo. “The kind of culture of like if someone falls down, pick them up and move forward together, and I feel that. I think everyone in the team really feels privileged to be part of McLaren.”

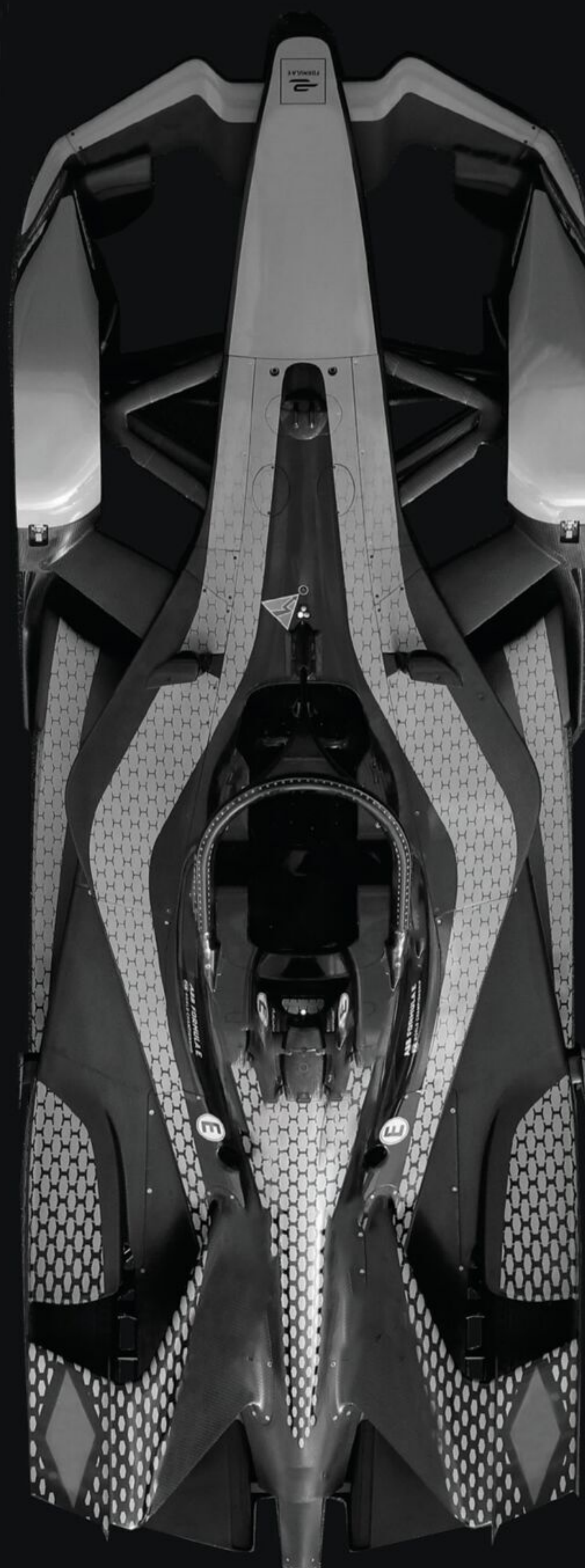
The 2020 season brought more silverware and real podium visits for Norris and Sainz, with the Briton adding a hat-trick of podiums in 2021’s first half. The MCL35M has retained its predecessor’s excellent traction and straightline-speed prowess, which allowed Norris to make progress in the wet to finish third at Imola, then repeat that result in the one-off special livery in Monaco. In the two Austrian races he was able to disrupt things for Red Bull and Mercedes, earning praise from Hamilton as they battled in the second event. The 21-year-old has been with McLaren since >>



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RICCIARDO'S TURNAROUND

McLaren quickly moved to replace Ferrari-bound Carlos Sainz Jr with Daniel Ricciardo for two key reasons. The first was the “exceptional performances that he had shown in the past”, says McLaren team principal Andreas Seidl. The second was how his positive personality would fit with the culture Seidl has been fostering at the rebuilding team, still F1’s second-best-ever in terms of race wins.

But after arriving from Renault over the winter, the first half of Ricciardo’s season was a major struggle. He had difficulty adapting to what the MCL35M needs to be fast at corner entry, and marry that with his late-braking style. He only headed Lando Norris in one race – Spain – and was even ignominiously lapped by his team-mate in Monaco. But Seidl says Ricciardo “never went into a negative spiral”.

“He always approached it with positivity, with belief and faith in himself, belief and faith in the team, and the same happened on the team’s side,” Seidl adds. “We were absolutely convinced that it was just a question of time when it would click, and we’d see the Daniel again that we all know from the past.”

In the run to the mid-season break after the Hungarian Grand Prix, McLaren “simply kept working hard” and “tried to work on these issues”, according to Seidl. “[That was] between the engineers and Daniel, with Daniel back home in the simulator [too].”

But the summer break proved to be a pivotal point in the Australian’s season. He jetted off to his home in Los Angeles, switched off, gathered his thoughts, and came back better, even if the events of Spa and Zandvoort masked his progress. Then came Monza, where he went from suffering “internal rage” at being so close to beating Max Verstappen and Norris in Friday qualifying to becoming McLaren’s first F1 race winner since Jenson Button at the 2012 Brazilian GP. “There was never a moment of doubt,” says Seidl.



“HE APPROACHED IT WITH POSITIVITY, WITH BELIEF AND FAITH IN HIMSELF, BELIEF AND FAITH IN THE TEAM”

Andreas Seidl

joining as a junior driver when he raced in European Formula 3 in 2017, and feels the changes Brown and Seidl have enacted means the “whole team is in a much better state”.

“I think one of the things we’re most excited by is going into next year, and having this platform, this base from the team, with the new regulations and rule changes,” says Norris. “Going into it like that — definitely the strongest we’ve been for many years.”

For Seidl, Norris has even been “instrumental in the development of the team over the past three years”, since he has “matured as a driver and professional athlete and continues to grow”.

Seidl adds: “Lando has been an important force in the evolution of the team, and his performances have supported our progress, especially in the first part of this season as Daniel was adapting to the car.”

“WE ALREADY HAVE INGREDIENTS IN THE TEAM THAT ARE IMPORTANT FOR BATTLING MERCEDES AND RED BULL”

Podiums aren’t the best measure of F1 success — there’s always a bigger fish to consider in terms of race victories. But McLaren will also head into F1’s new era as a winning operation once again, thanks to its surprise but commanding 1-2 result at Monza. After Sainz — who recognised his old team was “ready to win championships as a race team, they just need a car capable of doing it” when he headed for Ferrari — got so close to the shock win that went to Pierre Gasly and AlphaTauri in 2020, the team capped its climb up the pecking order with success for Ricciardo, backed up by Norris.

The Italian GP triumph demonstrated the team’s progress perfectly. It “expected to have a competitive car”, according to Seidl, because the Monza layout plays to the MCL35M’s strengths, but still faced a tough time beating Mercedes in particular. McLaren did need the Black Arrows’ dominant position post-Friday qualifying to implode in an engine-change penalty for sprint race winner Valtteri Bottas and Hamilton to mess up the start of that event, but its drivers seized their chances magnificently.

This was aided by McLaren producing the fastest pitstop of the race, plus adapting its strategy and car positioning well to ensure it could keep its 1-2 once Verstappen and Hamilton took themselves out of contention in *that* crash.

With Ricciardo shoeless and constantly grinning, Seidl led the team through rapturous celebrations in the Monza pitlane. The softly spoken German, reportedly a perfectionist unafraid to lay down the law if the situation requires it, was loudly cheering both Ricciardo and Norris as McLaren gathered for its team victory picture.

“[It was a] great experience for all of us,” Seidl notes. “Because it just showed that we already have some ingredients in the team that are important for battling teams like Mercedes and Red Bull. That was good to see.”



Hamilton has praised rising star Norris after battling together on track

McLaren made sure its staff back in the UK got in on the celebrations too once the race team had returned to base in the week following its first 1-2 since the 2010 Canadian GP. This is another key part of fostering the culture Seidl desires, bringing the “emotions” felt at the track to the workforce that stays behind and operates in support.

“Because that for me makes the difference compared to maybe other jobs or industries — that we have these opportunities of being part of a sports team, where you have these ups and downs, these emotions that come with a great result on a race weekend,” says Seidl. “They’re ones we go through many times on a race weekend, and it’s very important to celebrate these moments and together with the team enjoy these moments. Because that gives everyone this additional energy that you need to go the extra mile every day.”

McLaren still has work to do as the much-anticipated 2022 rules reset sharpens as an emerging-Death-Star silhouette into F1’s atmosphere (albeit minus the suggestions of impending apocalypse).

The way Norris’s race unravelled in Sochi last month left both team and driver aware that they need to sharpen their tools and procedures to succeed if such a situation is repeated. Hamilton triumphed there because Mercedes was able to convince him that the late-race rain would intensify, while McLaren’s messages left Norris certain that staying out was the right call — until it wasn’t. The team, which had to shore up its finances and make painful cuts during the early phases of the pandemic — including selling the MTC in a re-lease deal to release funds tied up in the property — also had a pitstop go badly wrong for Ricciardo in that race. Plus, it knows that the first car designed and built in its new windtunnel won’t come until 2024. It’s therefore keen to maintain realistic ambitions despite its outstanding recent run of success.

But there’s no doubt that McLaren has succeeded in reaching Brown’s light-side objective. That has resulted in major progress up the

F1 order, with McLaren currently edging its battle with Ferrari to take a second successive third place in the constructors’ championship. And it just might take the team to even greater glory in the next episodes of a famous F1 saga.

“We know we still have a long way to go to regularly battle with the Red Bull and Mercedes guys,” Seidl concludes.

“But I think with everything we have put in place, with the plan we have, with the projects we’re running also on the infrastructure side, everything we are doing on the organisational side still, with everything we’re doing on the cultural side also within the team, I’m absolutely convinced that we have everything in place that we need to get back to the front again.”



Until Monza, McLaren hadn’t scored a 1-2 since 2010 Canadian GP

THE RISE AND FALL OF LOTUS AS AN F1 SUPERPOWER

Sixty years ago, Innes Ireland scored the first world championship Formula 1 victory for Team Lotus, kicking off a run of success that stretched across the next three decades and changed the sport forever

KEVIN TURNER

PHOTOGRAPHY  **motorsport
IMAGES**

Stirling Moss had already scored four victories for Lotus founder Colin Chapman's cars, run by Rob Walker's privateer squad, when Team Lotus took its first world championship F1 success at the 1961 United States Grand Prix. Lotus would claim its first title double in 1963, and by the time Team Lotus closed its doors in 1994 the British constructor had racked up 79 victories, six drivers' titles and seven constructors' championships. Even now, only Ferrari, McLaren, Mercedes and Williams can better those figures.

To mark the 60th anniversary of that first success, we've delved into Lotus's F1 form over the years. We've used supertimes, which are based on the fastest single lap by each car at each race weekend, expressed as a percentage of the fastest lap overall (100.000%) and averaged over the season. We've used all Lotus entries, not just the works cars, but have ignored the times when the Lotus name has been brought back, first by the Malaysian-backed team that later became Caterham and then the Enstone-based 'Lotus' between its different Renault eras.

Lotus arrived in F1 in 1958 with the front-engined type 12 and 16 models. As historic racing has shown, the lightweight 16 had the potential to be rapid, but that was not unlocked in period.

The cars weren't reliable either. Lotus was 5.307% and 3.829% off the pace in 1958 and 1959 respectively, though the period's bigger gaps meant that it was actually fourth fastest in the latter year and took the same spot in the constructors' championship.

Chapman's first rear-engined F1 car, the 18, made Lotus a frontrunner and finished the season just 0.042% behind Cooper's

double title-winning team on supertimes. That result might have been reversed – and the championship fight rather closer – had fastest Lotus pilot Moss not been put out of action by a big crash caused when a wheel fell off his 18 at Spa, a terrible event at which Lotus driver Alan Stacey and Chris Bristow (in a Cooper) died in accidents.

Cooper and Lotus were both jumped by Ferrari as F1's new 1500cc regulations arrived in 1961. The 'Sharknose' 156's main advantage was engine power, and Ferrari was 1.060% clear across the season, only Moss virtuosity twice defeating the Italian cars in Walker's Lotus. Ireland's win in the season-closing race at Watkins Glen was scored in the absence of Ferrari, which had already secured both titles at the tragic Italian GP that had claimed the life of Wolfgang von Trips and 15 spectators. Ireland was replaced for 1962 as Jim Clark became lead driver. Chapman also introduced the first big Lotus F1 innovation, the monocoque chassis, with the Lotus 25. It was the fastest car by 0.269%, but unreliability allowed BRM and Graham Hill to take advantage.

There were no such mistakes in 1963, a 0.474% advantage being enough for Clark to win seven of the 10 races, the Scot and Lotus taking the maximum scores under the points system of the time.

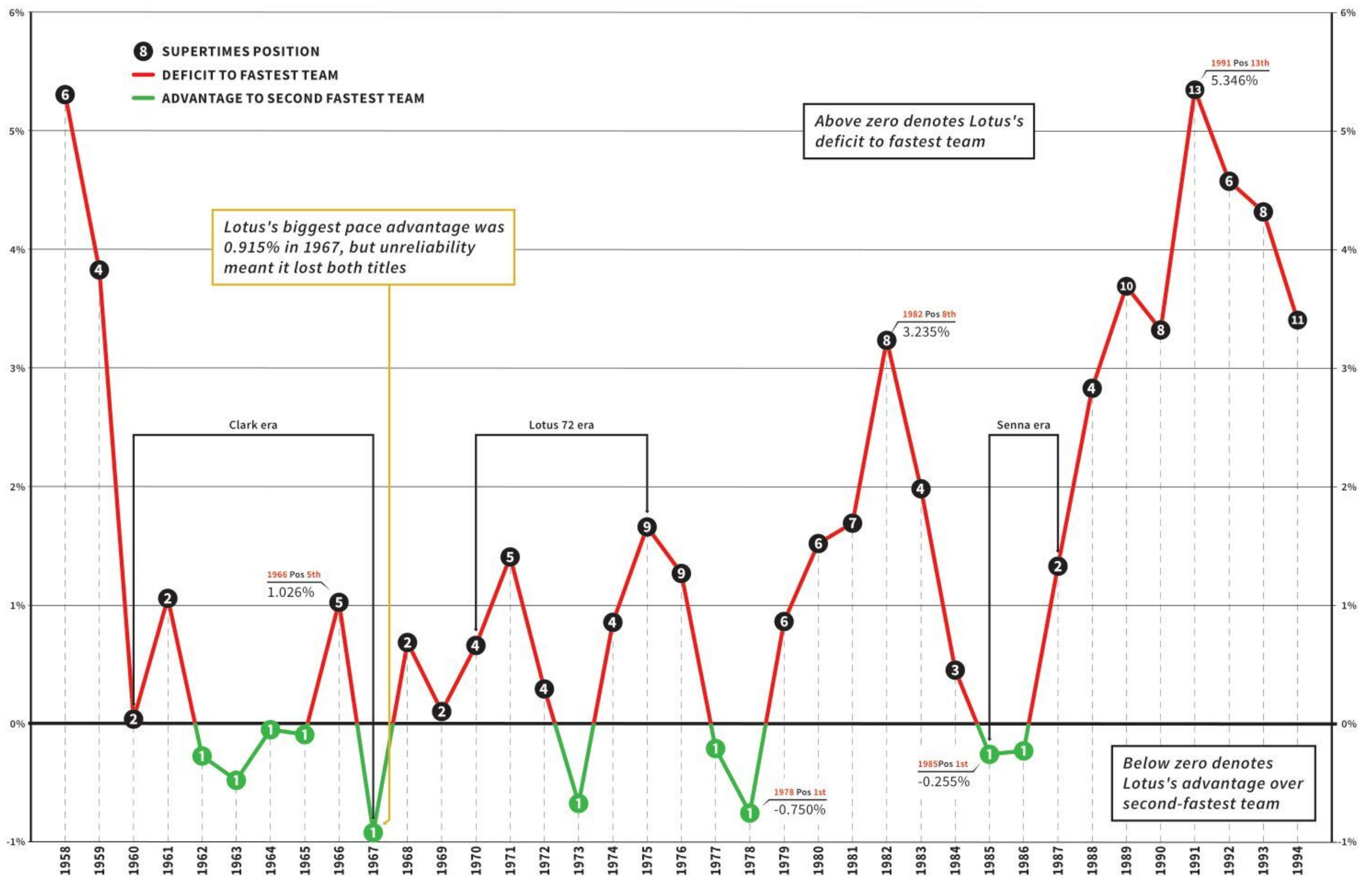
Lotus kept a narrow pace advantage for the final two seasons of the 1.5-litre era. The difference was that in 1964 unreliability cost Clark, whereas the following season he was able to finish – and win – the first six world championship races he started. It's also worth noting that Lotus's absence from the 1965 Monaco GP (due to being busy winning the Indianapolis 500) reduced its overall supertimes advantage – there were slower privateer Lotuses that are included in the calculations.



Innes Ireland took team's first victory in US GP driving Lotus 21



Ireland 'celebrates' Watkins Glen success with Colin Chapman



Lotus lacked a suitable powerplant for the arrival of the three-litre regulations in 1966 and fell to fifth on supertimes, 1.026% off the pace. It managed just one victory, but Chapman had a plan, having pulled together Cosworth expertise and Ford backing to create the DFV. And in the 49 he made it a stressed member, creating another gamechanger.

Across 1967 Lotus's advantage was 0.915% but even that underplays the car's edge over the opposition. If only the races at which the 49 appeared are included, that number climbs to 1.217%. Hill or Clark took pole for every race following the 49's arrival in June, but woeful reliability meant Lotus lost both championships to Brabham.

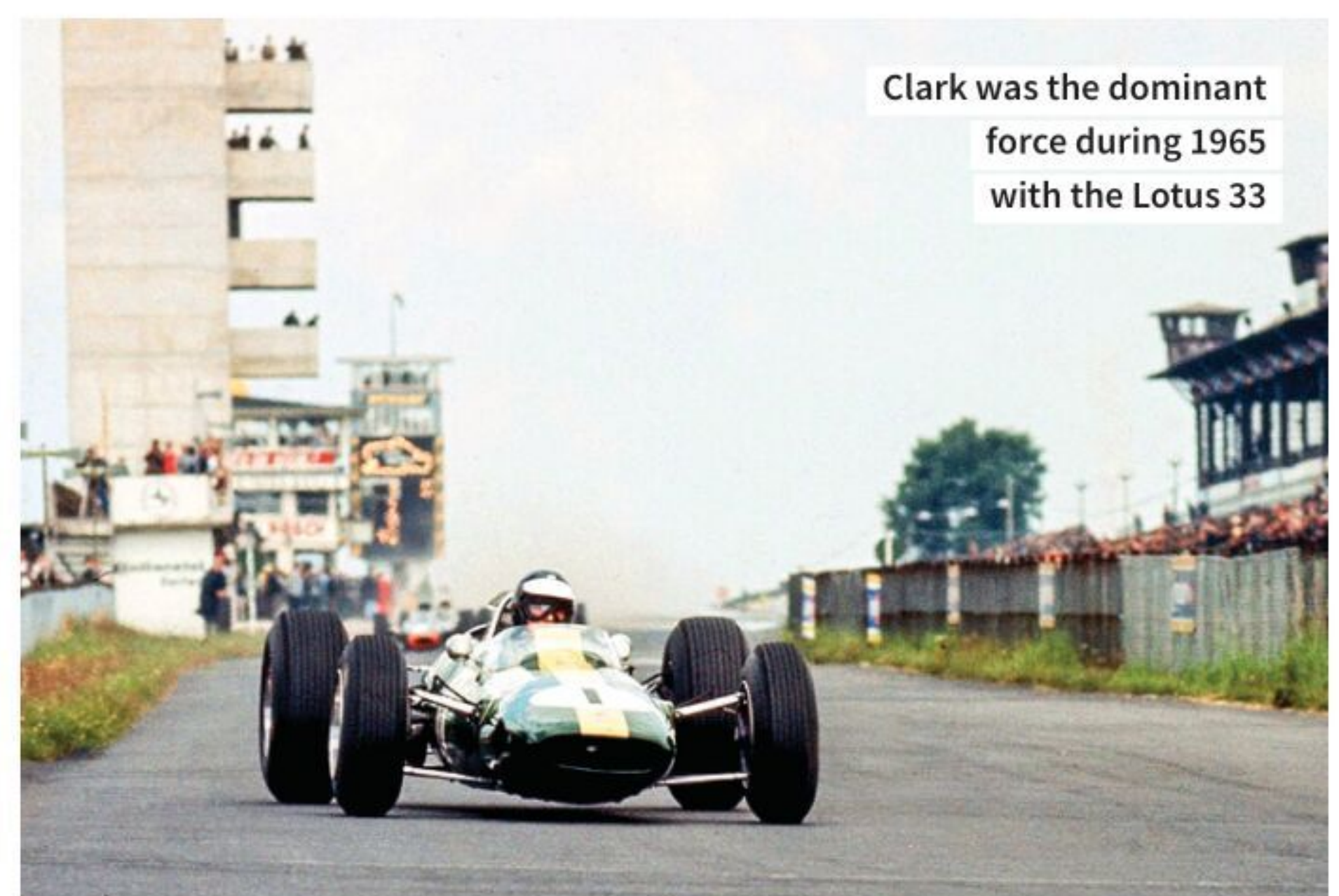
The 49 made amends in 1968. Lotus fell to second, behind Ferrari, and faced a strong challenge from Matra. But a dogged campaign from Hill in the wake of Clark's death helped Lotus secure a title double.

The Matra-Jackie Stewart and Lotus-Jochen Rindt combinations were evenly matched on pace in 1969, but the blue car's finishing record was much better. Stewart strolled to the title despite Matra's relatively small 0.106% advantage.

The 49 was still capable of winning in 1970, which was just as well given the time and work required to sort out Chapman's next wondercar, the 72. Over the season Lotus was only fourth fastest on supertimes, 0.663% behind Ferrari. But that includes the races in which the 49 was wheeled out, the events before the 72 was sorted, and the GPs after Rindt was killed at Monza. In the middle of the season, Rindt scored four straight victories and built enough of a championship lead to win the title posthumously.

Lotus fell back to fifth and 1.409% behind Tyrrell in 1971 as it worked to get the 72 optimised on Firestone's new slick tyres, but things were looking better by the end of the season. Emerson Fittipaldi scored five wins on his way to a fine title in 1972. It was a close season in terms of pace – Lotus was fourth, but only 0.296% slower than pacesetter Ferrari – but the 72 was consistently competitive and took both titles.

It arguably should have done the same in 1973. The combination of the now-perfected 72, Goodyear rubber, Fittipaldi and new signing Ronnie Peterson was the fastest of that campaign. Lotus had a 0.669% pace advantage, but bad luck for the Swede, the points being shared



between the two drivers, and a brilliant final F1 season from Stewart meant Lotus had to be content with 'just' the constructors' crown.

The 72 began to show its age in 1974 and was fourth quickest. Using both the 72 and its troubled 'replacement', the 76, Lotus was 0.858% slower than Ferrari, though it was only 0.142% behind the McLaren M23 that took both titles.

Lotus needed time to regroup and 1975 could perhaps be seen as a holding year, the 72E pressed into service once again. It fell to ninth fastest, 1.662% behind, and Lotus was seventh in the constructors' table, its worst performance to date.

The arrival of Mario Andretti and the new (if imperfect) 77 steadied the ship. Although Lotus was still ninth on supertimes in 1976, it closed to 1.270% from the front and Andretti won the famous wet season closer at Fuji. And Lotus was on the verge of another breakthrough with ground-effect.

The Lotus 78 was the result of work from Chapman, Tony Rudd and the design team on using airflow under the car to create downforce. >>

It was the fastest car of the 1977 season by 0.206%, and was 0.573% ahead of Ferrari, which claimed both titles with Niki Lauda. Problems with development Cosworth DFV engines cost Andretti several races, leaving the American third in the table, despite leading more laps and taking more poles than anyone else.

The 78 won two of the first three races of 1978, and Andretti was tied with Ferrari's Carlos Reutemann for second in the points standings, when Chapman wheeled out the sleek 79 for round six in Belgium. Andretti took pole by 0.79 seconds and won, with Peterson second in the old 78 to really rub in Lotus's advantage. Andretti would win another four races (and a fifth on the road), with Peterson adding a sublime success in Austria, as Lotus won both titles for the last time. Its advantage was 0.751% — or 0.993% once the 79 was introduced — representing F1's biggest margin since 1967.

Remarkably, Lotus would not win another F1 race for four years. In perhaps the best example of Chapman's quest to find the next big step, Lotus tried to make a 'full wing' car with the type 80. The team could never get the concept to work, while other squads — most notably Williams — simply built better versions of the 79.

Lotus ended up relying on the 79 for most of 1979 and fell to sixth, 0.865% off the pace, and subsequent models failed to arrest the slide. Lotus was 1.522% (sixth) and 1.694% (seventh) off the pace in 1980 and 1981 respectively as Chapman got more frustrated with increasingly tight F1 regulations — and the banning of the twin-chassis 88.

The turbo revolution was also under way, enabling those with forced induction to turn up the boost in qualifying. This spread out the field in terms of raw pace, even though the turbo cars' race pace (and reliability) was less impressive. That helps to explain why DFV-powered Lotus was able to win a race in 1982 despite being eighth fastest, 3.235% off pacesetter Renault.

Chapman died in December 1982 but had already had a hand in the next two Lotus F1 cars, the DFV-engined 92 and the Renault turbo-powered 93T. This brought the team closer to the pace and up to fourth fastest, but the gap to the front was still 1.984% and there were



Squad's final F1 podium came in 1988 Australian GP, despite Piquet spin

no wins in 1983 as Brabham battled Renault and Ferrari for the title.

There probably should have been in 1984 with the Gerard Ducarouge-penned 95T. The Renault-powered car lifted Lotus to fourth, 0.455% from double title-winner McLaren, and both Elio de Angelis and Nigel Mansell took a pole. A combination of McLaren's dominant race performances with its TAG-badged Porsche engine and some mishaps, most notably Mansell crashing out of the lead in the appallingly wet Monaco GP, meant no victories, but Lotus was third in the constructors' championship.

Ayrton Senna arrived for 1985 and the 95T was competitive, albeit a better qualifying machine than a race car. It was 0.255% clear of the field on raw pace and there were three victories, including Senna's brilliant wet-weather masterclass in the Portuguese GP.

Senna's finishing record was not as good as that of team-mate de Angelis, but the duo managed eight poles and nine podiums





between them, matching the points tally of Williams and 19 shy of the title-winning McLaren squad.

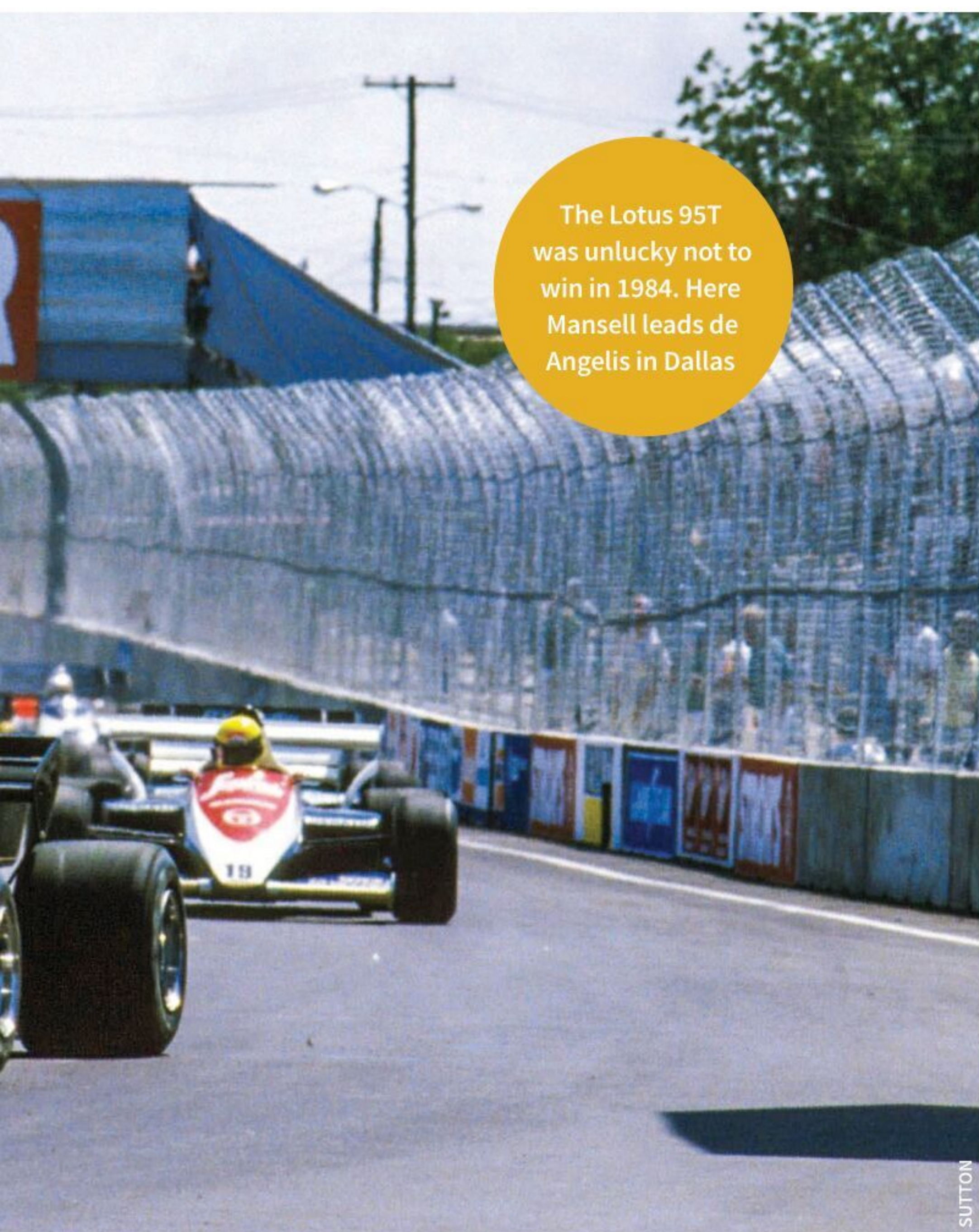
It was a similar story in 1986, Senna scorching to eight poles as Lotus topped the supertimes by 0.266%. But the Williams-Honda combination was normally better on race days and Alain Prost starred for McLaren, restricting Senna to fourth in the points and Lotus to third in the constructors' contest.

Lotus fell to second, 1.331% away, in 1987. But that reflects both the strength of Williams-Honda and a change of emphasis at Lotus. The Honda-powered 99T's active suspension looked after the tyres – not particularly helpful for qualifying but a good asset for GPs – and Senna focused on race set-up. The result was a consistent campaign that included two wins, six other podium finishes, and third place in the drivers' table behind Williams duo Nelson Piquet and Mansell.

The team lost Senna and decided not to continue with active

suspension in 1988. The 100T chassis was not in the same class as the similarly Honda-engined McLaren MP4/4, and new team leader Piquet had a lacklustre year. The raw pace gap to the front more than doubled, to 2.831%, and Lotus fell to fourth fastest despite troubles at Williams.

It was the beginning of a slide from which Lotus would not recover. The 1989 Lotus 101 was 3.690% off the pace in 10th, not helped by the similar switch from Honda to Judd power that had hurt Williams the year before. Performance was sufficiently poor that it brought management changes, but both Piquet and Satoru Nakajima failed to qualify at Spa, and Lotus fell from fourth to sixth in the constructors' table. By now ex-Williams designer Frank Dernie had joined the team and his Lamborghini-engined 102 was a marginal improvement – eighth fastest in 1990, 3.323% behind McLaren. Despite the best efforts of Derek Warwick and Martin Donnelly, Lotus could only finish eighth in the constructors' table.



The Lotus 95T was unlucky not to win in 1984. Here Mansell leads de Angelis in Dallas

“CHAPMAN’S INNOVATIONS, WHICH HELPED SHAPE THE MODERN GP CAR, MEAN LOTUS IS STILL AN F1 GREAT”

The troubled team changed hands but the revised 102 continued into 1991. Mika Hakkinen and Julian Bailey finished fifth and sixth respectively in the San Marino GP but they would be the only points Lotus scored all year. It fell to 5.346% off the pace.

The 102 soldiered on into the start of 1992 before being replaced by the Chris Murphy-designed 107. This was Lotus's best car for several years and, in the hands of Hakkinen and Johnny Herbert, was a consistent points threat. It was sixth fastest, the 4.577% gap exacerbated by the 102's appearances early in the season and the massive advantage – 1.492% – of the Williams FW14B at the front of the field. Money, or the lack of it, was becoming a significant problem and the 107 was not reliable, but Lotus still leapt to fifth in the points table.

The revised 107B fell to eighth fastest and sixth in the table in 1993 as the financial strain continued to bite. Thanks to the banning of many of the 'gizmos' perfected by Williams, the field closed up in 1994 but Lotus fell to 11th fastest, still 3.405% off the pace. The Mugen-Honda-powered 109 failed to score a point and Team Lotus finally closed its doors at the end of the 1994 season.

As a constructor, Lotus topped the supertimes rankings 10 times in 37 seasons, putting it on a par with McLaren and behind only Ferrari, which has been in F1 almost twice as long.

Chapman's innovations, which helped shape the modern grand prix car, and its successes in the 1960s and 1970s mean Lotus is still one of the greatest F1 teams of all time – and almost certainly the most legendary of the squads no longer with us. ❧

TOP 10

LOTUS FORMULA 1 CARS

There have been many great Lotuses. Here's our pick of the ones that stood out in F1

KEVIN TURNER

PHOTOGRAPHY  **motorsport**
IMAGES



10

LOTUS 107

Years 1992-94 | Wins 0
Drivers' titles 0
Constructors' titles 0

Lotus, under different management, was in its declining years in the early 1990s, but the Chris Murphy-designed 107 was a neat, attractive and competitive car that was a points scorer across two seasons and lifted Lotus back into the top six of the world championship.

With the 102, Lotus had slumped to 13th fastest in 1991, but it leapt to sixth the following year. Mika Hakkinen and Johnny Herbert used the customer Ford HB V8-engined 107 and were often threats for points – when they were only awarded to the top six. Reliability was a problem, but the 107 was good enough to take Lotus to fifth in the constructors' championship, its best result since 1988.

The car was developed into 107B spec for 1993 and ran active suspension, with Herbert scoring the lion's share of the points alongside new team-mate Alex Zanardi. A limited budget meant Lotus was never likely to challenge the era's big hitters Williams, McLaren, Benetton and Ferrari, but had topped the midfield in 1992 and was sixth, behind Ligier, the following year.

The 107C, now with Mugen-Honda V10 power, started the 1994 campaign, after all the gizmos had been banned. It was replaced by the 109, but Team Lotus was already on the financial slippery slope that led to its closure at the end of the season.

9

LOTUS-CLIMAX 12

Year 1958 | Wins 0
Drivers' titles 0 | Constructors' titles 0

"Hugely ambitious, something of a letter of intent," says Clive Chapman, son of Lotus founder Colin and boss of Classic Team Lotus, of the front-engined Lotus 12. Colin Chapman always wanted to push the boundaries so it's no surprise that his first F1 car wasn't conservative. It was lightweight – something that would become a Lotus hallmark – and had disc brakes, magnesium 'wobbly web' wheels and a novel sequential-style gearbox.

Originally an F2 car, the 12 had to make do with a two-litre Coventry Climax engine when Team Lotus made its first F1 world championship start at the 1958 Monaco Grand Prix (below). That grew

to 2.2 litres, but it was still underpowered compared to its 2.5-litre rivals.

Cliff Allison finished in the top 10 in all but one of his 1958 world championship starts and took the team's first points at the Belgian GP. That race could have yielded even more as winner Tony Brooks suffered gearbox failure when his Vanwall crossed the line, the engine in second-placed Mike Hawthorn's Ferrari gave up on the final tour, and the suspension of Stuart Lewis-Evans's Vanwall collapsed. "That remarkable little Lotus was never nearer creating a major sensation!" reported Autosport's Gregor Grant.



**8****LOTUS-HONDA 99T**

Year 1987 | Wins 2

Drivers' titles 0 | Constructors' titles 0

The last great F1 Lotus innovator? The team had been developing active suspension for several years and put the system – which brought extra weight but was more comfortable, particularly on street circuits – onto its 1987 challenger.

The 98T had won two races in 1986, finishing third in the constructors' championship, and aside from the arrival of active suspension the other big difference in the 99T was its engine, Honda replacing Renault. Unlike its predecessors, the

99T was not a particularly potent qualifying car – Ayrton Senna took one pole, as opposed to 15 scored across the previous two campaigns – but the active suspension helped look after the tyres.

Senna used this to finish third in the drivers' championship and scored eight podiums, including wins in Monaco and Detroit, despite the car's aerodynamic limitations. Those successes were the first for a car with active suspension in F1 – and the last for Team Lotus.

**7****LOTUS-RENAULT 97T**

Year 1985 | Wins 3

Drivers' titles 0 | Constructors' titles 0

Designer Gerard Ducarouge's 95T was probably unfortunate not to win a race in 1984, but the next car put that right. The Renault-engined 97T took three victories, the first post-Colin Chapman Lotus to win a world championship race.

New recruit Ayrton Senna and Elio de Angelis proved a potent line-up, the Brazilian being the faster and taking seven poles to de Angelis's one, while the Italian had the better finishing record. He finished only five points behind Senna in the standings, and Lotus matched Williams's tally in the 1985 constructors' table.

The 97T also has a special place in F1 history as the car in which Senna scored his first – and arguably finest – GP victory in appalling conditions at Estoril. Senna was a leading contender next time out at Imola before running out of fuel, de Angelis taking the win after on-the-road victor Alain Prost's McLaren was found to be underweight.

Senna would lead more laps than any other driver during the season, but had to wait for September's Belgian GP before adding another victory on his way to fourth in the points.

6**LOTUS-CLIMAX 18**

Years 1960-61 (with leading teams)

Wins 4 | Drivers' titles 0

Constructors' titles 0

The 18 was Colin Chapman's real F1 breakthrough. The boxy-looking 18 was his first rear-engined F1 car – and also proved successful as an F2 and Formula Junior chassis with different powerplants.

In Stirling Moss's hands, Rob Walker's privately run 18 scored the first world championship pole and maiden victory for Lotus at the 1960 Monaco GP. Moss was probably the only driver capable of stopping Cooper duo Jack Brabham and Bruce McLaren dominating the season, but his big Spa crash – after a wheel fell off – meant he missed three GPs, which Brabham won.

Lotus still finished second in the constructors' table and did so again in 1961 as Ferrari dominated, Moss proving the star once more by taking two of his finest victories in Walker-run machinery. Future world champions Jim Clark and John Surtees both made their world championship F1 debuts in Lotus 18s.



5

LOTUS-FORD 78**Years** 1977-78 | **Wins** 7**Drivers' titles** 0 | **Constructors' titles** 0

Is this the most-overlooked great F1 Lotus? The 79 often gets the credit for bringing ground-effect – using the ‘sealed’ underbody of the car to create downforce – to F1, but its predecessor got there first.

Mario Andretti and the Lotus 78 was the fastest combination of 1977. The American took more poles and led more laps than any other driver that season, but reliability problems – often due to the more powerful development Cosworth DFV engines the 78 probably didn't need to win – helped Niki Lauda and Ferrari steal both titles. Andretti still took four victories, while Gunnar Nilsson added another with a brilliant performance at the rain-hit Belgian GP.

Andretti and new team-mate Ronnie Peterson took a win apiece at the start of 1978 before the 79 arrived. Perhaps the ultimate Lotus F1 moment came on the 79's debut at Zolder when Andretti won in the new car and Peterson stormed to second in the old one...

Sadly, the 78's career ended on a tragic note. Following a practice crash in his 79 at Monza, Peterson switched to a 78 for the Italian GP. He was involved in a startline accident and died after complications set in.



4

LOTUS-FORD 79**Years** 1978-79 | **Wins** 6**Drivers' titles** 1 (Mario Andretti, 1978) | **Constructors' titles** 1 (1978)

One of the classic F1 game-changers, the 79 was almost untouchable after it arrived for round six of 1978, with only the Michelin-shod Ferrari 312T3 proving a consistent challenger.

The 79, which built on the ground-effect advances of the 78, won six of its 11 races in 1978 – and crossed the line first in a seventh (at Monza), only for Andretti to be penalised for jumping the start. It was still enough for him to clinch the drivers' title, but Peterson's fatal accident overshadowed the event. Jean-Pierre

Jarier stepped in and was set to win the season-closing Canadian GP when he lost oil pressure, but Lotus had already comfortably secured the constructors' crown.

The 79's chief weakness was probably that it wasn't particularly stiff, meaning that it didn't make the most of ground-effects. While Chapman pursued the next big step with the ill-fated Lotus 80, rival teams optimised ground-effects in 1979 with stiffer machines and Lotus slumped to fourth and no more wins with the 79.



3

LOTUS-FORD 49**Years** 1967-70 | **Wins** 12**Drivers' titles** 1 (Graham Hill, 1968) | **Constructors' titles** 1 (1968)

The car that brought the Cosworth DFV to F1 – and made it a stressed member – could be higher on this list but for the events of 1967. The 49 won on its debut at the Dutch GP and took pole for every world championship race thereafter in 1967 in the hands of Jim Clark and Graham Hill. It had the biggest performance advantage of any Lotus and the 10th largest in championship history, but myriad reliability issues (engine, transmission, suspension) cost Lotus both titles.

Relative to the opposition, the 1967 49 is the fastest F1 car not to secure either the drivers' or constructors' championship, but it made up for it the

following year. A combination of bad luck for Jackie Stewart and Matra, Ferrari unreliability and a dogged campaign from Hill (above) in the wake of Clark's death brought Lotus both titles. Jo Siffert also took his Rob Walker-run 49 to a famous win in the British GP.

Jochen Rindt proved rapid in the 49B in 1969 and took five poles, but misfortune prevented him from challenging Stewart more consistently and he took just one win. But there was still time for one more success, Rindt putting in a famous charge at the 1970 Monaco GP to win in the 49C.

2**LOTUS-CLIMAX 25/33****Years** 1962-66 | **Wins** 19**Drivers' titles** 2 (Jim Clark, 1963 and 1965)**Constructors' titles** 2 (1963 and 1965)

Perhaps combining these two is cheating, but the 33 was a direct development of the 25, with much of the difference to be found in the suspension to accommodate wider tyres.

The 25 is the reason modern racing cars have monocoque chassis. "The monocoque increased stiffness and reduced frontal area," explains Clive Chapman. "The fuel cells reduced fire risk."

Jim Clark and the 25 set the pace in 1962, taking six poles and five fastest laps from the nine championship rounds, but an inability to finish enough races lost both titles, scooped by Graham Hill and BRM.

But the 1963 season was one of the most dominant in F1 history. Clark took seven poles and seven wins from the 10 rounds and led an astonishing 71.5% of the laps. Thanks to the dropped-scores points system of the day, Lotus and Clark took maximum championship tallies as they crushed the opposition.

Clark used the 25 and 33 during 1964. He was again the quickest but appalling reliability in the second half of the year, including at the very end of the title-deciding Mexican GP, meant John Surtees and Ferrari took the titles.



Lotus and Clark reasserted their position in 1965, taking both championships (largely with the 33, though the 25 was wheeled out to win in France!), despite missing the Monaco GP in order to win the Indianapolis 500.

The 33, with two-litre power, was still good enough to take a podium at the 1966 Dutch GP and the 1967 Tasman title in Clark's hands.

**1****LOTUS-FORD 72****Years** 1970-75 | **Wins** 20**Drivers' titles** 2 (Jochen Rindt 1970, Emerson Fittipaldi 1972)**Constructors' titles** 3 (1970, 1972-73)

Given that Autosport voted the Lotus 72 the greatest competition car of all time in 2020, it should be no surprise to see it top this list.

Like the 25 and 49 before it, the 72 had a troubled early life but, unlike its famous predecessors, the issues were overcome soon enough to deliver a double title success in its first year. The wedge-shaped 72, which reset the template for single-seater racing cars around the world with its side radiators, also had a longer frontline career and won more world championship races than any other car on this list.

Once the 72 had been sorted, and its anti-squat

suspension removed, Jochen Rindt went on a run of four consecutive wins in the middle of 1970, which was enough to clinch both the drivers' and constructors' championships despite the Austrian's death at Monza.

Trouble getting to grips with Firestone's new slick tyres made for a winless 1971, but the 72D was on the right track by the end of the campaign. Emerson Fittipaldi then took five wins on his way to beating Tyrrell's Jackie Stewart to the 1972 crown.

Lotus took both titles that year and could have done in 1973. It had arguably the fastest car, plus Fittipaldi and Ronnie Peterson on its books, and

won the constructors' championship with seven wins to Tyrrell's five. But its two stars took points off each other, Peterson suffered some bad luck, and Stewart put in one of the finest F1 campaigns to take his third drivers' title before retiring.

With Fittipaldi at McLaren, Peterson led the charge in 1974 and scored three victories, but the opposition had overtaken Lotus. The failure of the Lotus 76 meant the ageing 72 was pressed into service again in 1975. Predictably, it was not competitive, but its impact on the sport and five world championships had already secured its place in F1 history.

RACE CENTRE

RALLY FINLAND • WORLD OF SPORT

Evans raised his game to a new high in Finland, his win giving his title hopes a huge lift



Evans joins the legends with fearsome form in Finland

The Toyota star became just the second Brit to win Rally Finland, and is now the only driver who can deny Sebastien Ogier an eighth World Rally crown

TOM HOWARD

PHOTOGRAPHY **McKLEIN**



It was perhaps fitting that, as Rally Finland celebrated its pantheon of great drivers for the event's 70th anniversary, it welcomed a new member to its exclusive club of winners in Elfyn Evans. Last week's anniversary edition of the 'Grand Prix on Gravel' will be etched in the rally's storied history as one of the great battles, from which Toyota's man emerged victorious after coming through an intense head-to-head with Hyundai's Ott Tanak and Craig Breen.

It will also be remembered as perhaps Evans's most complete WRC drive to date and confirmation that he deserves to be regarded as an elite force in rallying. He won 10 of the 19 stages to defeat Tanak by 14.1 seconds. The victory also provided a lifeline for the Welshman's title hopes, slashing championship leader Sebastien Ogier's advantage from 44 points to 24 with two events remaining.

Rally Finland didn't deliver the Kalle Rovanpera home victory the Finns craved so much, and in fact for the first time since 2013 Finnish drivers were absent from the home podium. But it was history-making in another way as Evans became only the second driver from the UK – after Kris Meeke in 2016 – to win the event, and just the eighth driver from outside the Nordic nations to conquer Finland's iconic rollercoaster gravel roads.

Such was the spectacle of three of the WRC's best going toe to toe, pushing to the absolute limit on the championship's fastest and most challenging roads, that Hyundai boss Andrea Adamo declared the display "a nice advertisement for rally."

An unusual COVID-19-induced switch from the summer to an autumn calendar berth, to allow fans to attend, provided cooler conditions. Preserving tyres became irrelevant due to damper roads, turning the rally into a 'park the brain at the startline and collect it at the end' on-the-limit sprint.

After Rovanpera's sublime display to win last month's Acropolis Rally, following a maiden victory in similar gravel conditions in Estonia, the 21-year-old was carrying a



weight of expectation as the overwhelming pre-event favourite. Rovanpera shared the pressure with compatriot and 2017 winner Esapekka Lappi, who was back in a WRC car for the first time in 10 months after losing his seat at M-Sport. Lappi piloted a fifth Toyota Yaris, run by the factory team based in the rally's host city Jyväskylä, in what was effectively an evaluation for a seat alongside Ogier in the team's third car for 2022.

A Finnish-based driver kicked off proceedings by scoring the first stage win on Friday, but it wasn't Rovanpera or Lappi. Toyota's Japanese star Takamoto Katsuta successfully blasted through the streets he calls home, paired with his third different co-driver in as many events in Aaron Johnston. That was to be Katsuta's

highlight. A wild sixth-gear, 360-degree spin on the next stage cost him 21s, but incredibly no damage in what was arguably the save of the season.

From there, Friday seemingly belonged to Hyundai as the South Korean marque surprised Toyota in its back yard, where the Yaris has been meticulously developed. Given Toyota has won every Rally Finland since rejoining the WRC in 2017, Hyundai came in as underdog, with Tanak admitting he would "throw everything in" to challenge.

Tanak and Breen starred as they shared the stage wins on the next four tests, before the new jump-laden Oittila night stage, the first test held in darkness at the event since 1994. Drivers had already labelled it the toughest, and it did its best to shuffle the pack. Tanak headed into the test with a slender 1.5s lead over Breen. A slow-starting Rovanpera, struggling with set-up issues, was only 8.3s adrift and ahead of the impressive Lappi and Evans, all within striking distance.

In a sign of things to come Evans, second on the road, blitzed the hidden crests as darkness fell to win the test by 1.6s from Lappi, who showed no signs of rustiness in a WRC car. Tanak was unable to commit like Evans, dropping 8s and crucially the rally lead. "I really enjoyed it, but it's not been easy," said Evans. "It's difficult to be relaxed in the dark like this, and in the last part of the stage it's very difficult to see what's on the side of the road."



Breen had to temper his competitive desire to keep hold of a hard-earned podium



WRC returnee Lappi
impressed on home turf
to take fourth place

“I always questioned what Finland would be like in the dark. It’s absolutely incredible”

Evans didn’t enjoy it as much as Breen, whose impressive Friday display was rewarded by a 2.8s lead over Tanak, while Evans leapfrogged Lappi and Rovanner from fifth to third. “It’s amazing – I always questioned what Finland would be like in the dark, and now we’ve felt it and witnessed it,” said Breen. “My lights weren’t 100% to be honest, but it’s just incredible.”

The feeling wasn’t shared by Hyundai team-mate and title challenger Thierry Neuville, who ended Friday more than half a minute off the pace in sixth. “I just couldn’t commit to it and the visibility was quite poor,” said Neuville. “My lights weren’t nice and I didn’t want to do a mistake because it would have been stupid.”

First on the road, Ogier had battled his own lack of speed and set-up woes that left him strangely subdued in seventh: “We need to understand exactly why we had no pace. I have to understand if I was just too slow or if there is something we can do with the car set-up.”



MODEST EVANS ADMITS FINLAND PERFORMANCE HIS BEST YET



Evans found himself
tuned in to the Yaris,
boosting his confidence

By nature, Elfyn Evans is one of the more modest characters in the World Rally Championship, but even he had to admit that the performance in Finland was the best of his career to date.

The Welshman has become accustomed to winning recently. He’d already tasted victory in Portugal this year, following triumphs in Sweden and Turkey in his title tilt in 2020, and of course his maiden win on home soil at Rally GB in 2017. But this memorable success after a hard-fought battle with Ott Tanak and Craig Breen has garnered high praise.

“It is probably pretty high,” said Evans when asked where the drive ranks. “It’s always difficult to beat the first win at home in Wales, but in terms of performance this probably ranks the highest.”

True to form, Evans reverted to his modest nature in his immediate reaction to achieving a rare feat in rallying for anyone born outside of the Nordic states. “I’m pretty happy with how the weekend went,” he said. “I perhaps wasn’t that confident coming into it to be honest,

but we found a good feeling with the car quite early on, and we improved that again for Saturday and we took it from there.

“Four stage wins on Saturday morning really went towards the win, but from there on it was about trying to fend Ott and Craig off as they were charging pretty hard. I’m happy we managed to do it.

“Everything was just working inside the car and I had confidence with what the car was doing. I felt really quite good and able to use the strengths of the car. We had to push hard but it came quite naturally.”

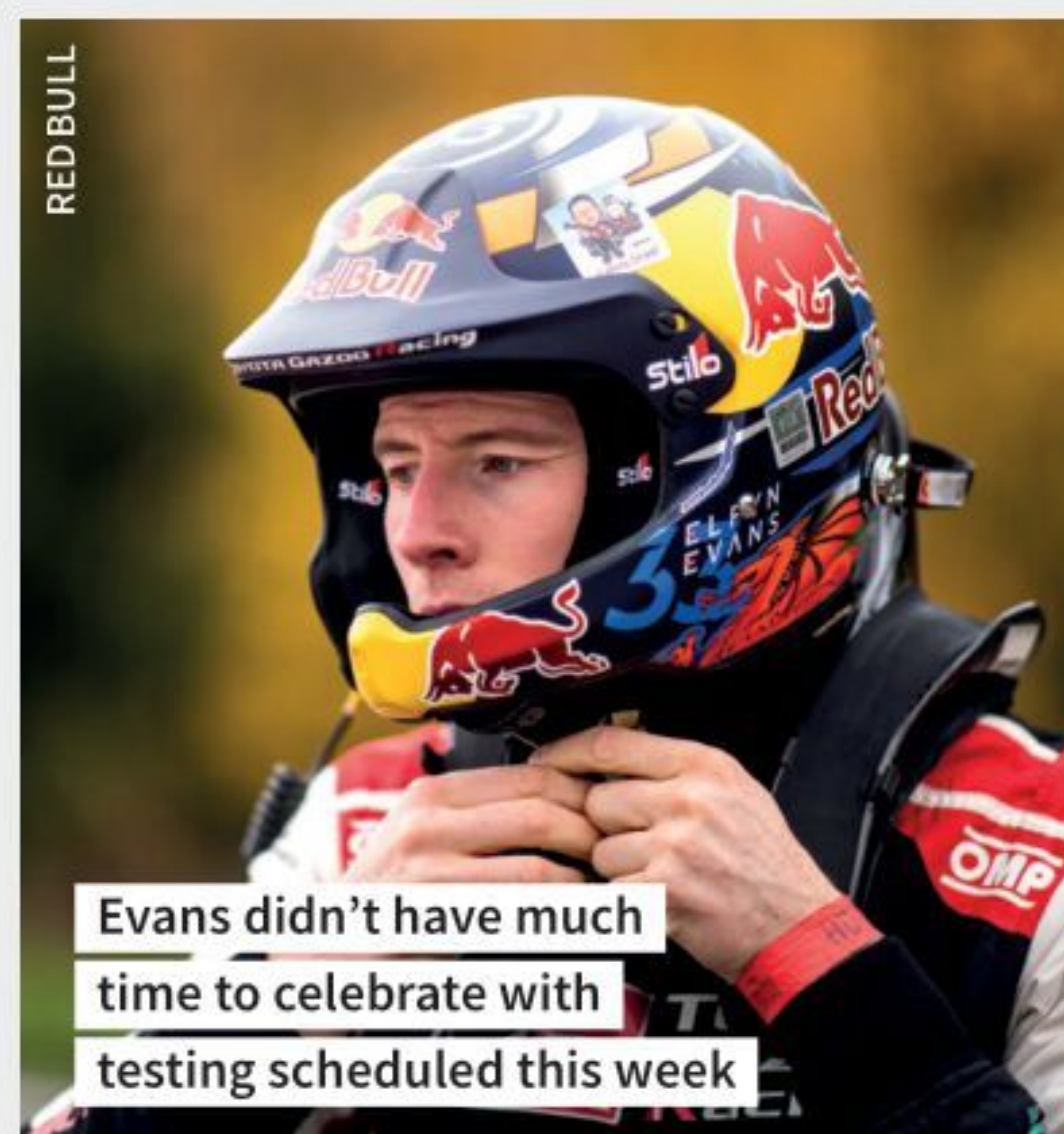
While Evans may not have realised the magnitude of what he achieved on Finland’s gravel roads, his rival and two-time winner Tanak did. “It seems as though Elfyn is perhaps not so proud of himself, but I think the pace was quite high and on the limit,” said Tanak.

“We had the pace to come close to this [Evans’s speed], but when we came close he found another gear.”

The feat was not lost on Evans’s Toyota boss, three-time (2010, 2014-15) Rally Finland winner Jari-Matti Latvala either: “For me, Elfyn can be really proud of what he did here. He did an incredible job.

“Winning in Finland, that is something all drivers want to do. There are two rallies in the championship, with Finland and Monte Carlo, that are the classics and winning here is always something special.”

Such is the busy world of the WRC that Evans will have little time for the achievement to sink in and to celebrate with his nearest and dearest. “I’m not going home – I have got a pretty busy week so not too much time for celebrating,” Evans added. “I’m testing on Wednesday.”



Evans didn’t have much
time to celebrate with
testing scheduled this week



Without a pre-event test, the M-Sport Fords of Gus Greensmith and Finland WRC newcomer Adrien Fourmaux had their work cut out and were well adrift of the pace, rounding out the top 10.

Friday night's venture into the unknown presented a tantalising Saturday, with only 7.9s covering the top five of Breen, Tanak, Evans, Lappi and Roanpera. The longest day of the rally, featuring nine stages, developed into a high-speed head-to-head between Evans and Tanak, with Breen also in the mix.

Buoyed from conquering the darkness, Evans, in the words of Breen, "found seventh gear and drove into the distance" on Saturday, completing a clean sweep of the morning loop by winning all four stages. Unlike previous events where confidence had eluded him, Evans was clicking with his Yaris and the times were coming thick and fast. Tanak and Breen couldn't live with Evans, who climbed from third to the lead on stage eight, a position he would not relinquish.

By stage 10, the final of the morning loop, hopes of a fairytale victory for Roanpera on home soil were over. He had overtaken Lappi for fourth, but lost the rear of his Yaris and, in trying to correct it, ploughed head-on into a pile of sand that was

"I was at a point where I was at the maximum amount of risk before making mistakes"

protecting cars from a telegraph pole.

He had been unable to find the sweet spot in his Yaris. "I think the [telegraph] pole would have broken down [if the sand was not there and we hit that] and maybe not such big damage, but anyway it is not a good situation to be in", said Roanpera. "I felt quite good all weekend but of course the driving was not so good with the car. The feeling was not easy and we had to push a lot all of the time."

Tanak, a previous master of Finland's roads with wins in 2018 and 2019, responded to Evans's pace in the afternoon and the battle went up a notch. The Hyundai driver won three stages in a row, but Evans held firm and was never more than 1.2s shy of the Estonian across the tests. Both were pushing each other to the limit, while Breen, lacking the confidence

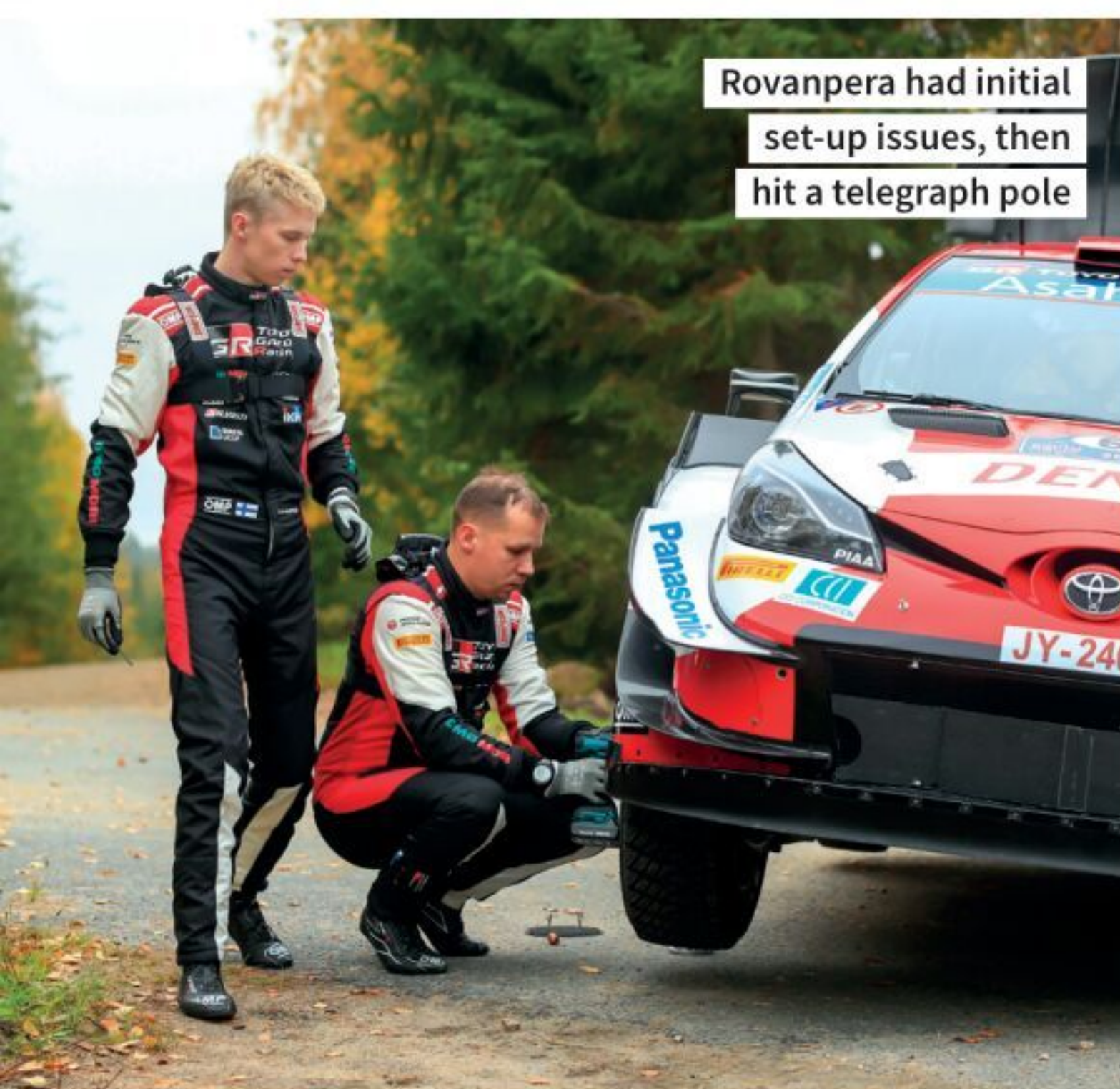


of his full-time WRC rivals, had to hold himself back to prevent a mistake and the loss of another hard-earned podium.

"Elfyn really found another level on Saturday as the afternoon progressed," said Breen. "I arrived at a point where I was at the maximum amount of risk I could take before making mistakes."

Evans stopped the 'rot' on stage 14 before the pair clocked identical times on the second run through the Jyväskylä streets, this time at night, so Evans held a 9.1s advantage over Tanak heading into the final day. "I tried to put as much pressure on Elfyn as possible," said Tanak. "If he does win the event he will at least deserve this win."

Roanpera was not the only casualty on Saturday: Neuville saw his title hopes evaporate after a water leak caused by a





Evans and co-driver
Martin savour
the moment

compression on stage 14 prematurely ended his resurgence in fifth. The Ypres Rally winner's retirement handed the position to an improving Ogier, despite the Frenchman being issued with a one-minute penalty and an €800 fine for failing to have his helmet fastened correctly on stage 12. Katsuta also joined the list of those out of contention after clipping a tree on stage eight. "It was a good day [until that point] – the speed was there and we were able to control the position, but unfortunately there was nothing I could do," said Neuville.

Tanak took 0.4s out of the rally lead to win Sunday's opening stage, but there was no stopping Evans, who won the final three stages and inflicted the most damage on Ogier's championship lead by claiming the powerstage and its bonus points. A strange drop in power on his Yaris prevented Ogier from securing a bonus point, leaving the seven-time champion to settle for fifth.

For Evans, it was a perfect win that reignited his title hopes, while Hyundai outlined how far it has come by scoring a double podium on its bogey event, with Tanak and Breen. The Irishman did his hopes of landing a 2022 full-time drive no harm with a third consecutive podium.

Likewise, an impressive fourth for Lappi may have secured a WRC return next year, while M-Sport's Greensmith and Fourmaux, operating with a new co-driver in Alexandre Coria, finished a distant sixth and seventh respectively.

As for the title race, Evans believes his chances have moved in the right direction, but only time will tell if this win will be remembered as a turning point or simply the weekend he truly became a rally great. 🏆

RESULTS ROUND 10/12, RALLY FINLAND, 1-3 OCTOBER

POS	DRIVER / CO-DRIVER	TEAM / CAR	TIME
1	Elfyn Evans (GBR) Scott Martin (GBR)	Toyota Gazoo Racing WRT / Toyota Yaris WRC	2h19m13.7s
2	Ott Tanak (EST) Martin Jarveoja (EST)	Hyundai Shell Mobis WRT / Hyundai i20 Coupe WRC	+14.1s
3	Craig Breen (IRL) Paul Nagle (IRL)	Hyundai Shell Mobis WRT / Hyundai i20 Coupe WRC	+42.2s
4	Esapekka Lappi (FIN) Janne Ferm (FIN)	RTE-Motorsport / Toyota Yaris WRC	+58.8s
5	Sebastien Ogier (FRA) Julien Ingrassia (FRA)	Toyota Gazoo Racing WRT / Toyota Yaris WRC	+2m54.4s
6	Gus Greensmith (GBR) Chris Patterson (GBR)	M-Sport Ford WRT / Ford Fiesta WRC	+5m02.3s
7	Adrien Fourmaux (FRA) Alexandre Coria (FRA)	M-Sport Ford WRT / Ford Fiesta WRC	+6m22.9s
8	Teemu Suninen (FIN) Mikko Markkula (FIN)	Movisport SRL / Volkswagen Polo GTI R5	+9m52.1s
9	Mads Ostberg (NOR) Torstein Eriksen (NOR)	TRT World Rally Team / Citroen C3 Rally2	+10m07.8s
10	Emil Lindholm (FIN) Reeta Hamalainen (FIN)	Skoda Fabia Rally2 Evo	+10m52.8s

OTHERS

34	Kalle Rovanner (FIN) Jonne Halttunen (FIN)	Toyota Gazoo Racing WRT / Toyota Yaris WRC	+1h02m51.7s
37	Takamoto Katsuta (JPN) Keaton Williams (GBR)	Toyota Gazoo Racing WRT / Toyota Yaris WRC	+1h21m33.5s
R	Thierry Neuville (BEL) Martijn Wydaeghe (BEL)	Hyundai Shell Mobis WRT / Hyundai i20 Coupe WRC	SS14 -water leak

STAGE TIMES

STAGE	FASTEST	LEADER	SECOND
SS1 Harju 1 (1.44 miles)	Katsuta 1m49.7s	Katsuta	Neuville +0.2s
SS2 Assamaki 1 (7.65 miles)	Breen 5m44.8s	Tanak	Breen +0.7s
SS3 Sahloinen-Moksi 1 (13.28 miles)	Tanak 10m14.5s	Tanak	Breen +1.7s
SS4 Assamaki 2 (7.65 miles)	Tanak 5m35.9s	Tanak	Breen +3.8s
SS5 Sahloinen-Moksi 2 (13.28 miles)	Breen 9m56.7s	Tanak	Breen +1.5s
SS6 Oittila (12.27 miles)	Evans 10m21.5s	Breen	Tanak +2.8s
SS7 Kakaristo-Hassi 1 (11.29 miles)	Evans 8m34.5s	Breen	Tanak +4.0s
SS8 Paijala 1 (14.05 miles)	Evans 10m28.9s	Evans	Breen +0.9s
SS9 Arvaja 1 (8.38 miles)	Evans 6m55.0s	Evans	Breen +4.0s
SS10 Patajoki 1 (12.77 miles)	Evans 10m19.8s	Evans	Breen +5.6s
SS11 Kakaristo-Hassi 2 (11.29 miles)	Tanak 8m23.5s	Evans	Breen +7.3s
SS12 Paijala 2 (14.05 miles)	Tanak 10m18.5s	Evans	Tanak +7.9s
SS13 Arvaja 2 (8.38 miles)	Tanak 6m49.5s	Evans	Tanak +7.7s
SS14 Patajoki 2 (12.77 miles)	Evans 10m09.2s	Evans	Tanak +9.1s
SS15 Harju 2 (1.44 miles)	Tanak and Evans 1m48.4s	Evans	Tanak +9.1s
SS16 Laukaa 1 (7.30 miles)	Tanak 5m24.2s	Evans	Tanak +8.7s
SS17 Ruuhimaki 1 (6.91 miles)	Evans 5m25.5s	Evans	Tanak +12.2s
SS18 Laukaa 2 (7.30 miles)	Evans 5m18.0s	Evans	Tanak +12.4s
SS19 Ruuhimaki 2 (powerstage) (6.91 miles)	Evans 5m18.9s	Evans	Tanak +14.1s

DRIVERS' CHAMPIONSHIP 1 **Ogier** 190; 2 **Evans** 166; 3 **Neuville** 130; 4 **Rovanpera** 129; 5 **Tanak** 128; 6 **Breen** 76; 7 **Katsuta** 68; 8 **Greensmith** 52; 9 **Dani Sordo** 43; 10 **Fourmaux** 42.

MANUFACTURERS' CHAMPIONSHIP 1 **Toyota Gazoo Racing WRT** 441; 2 **Hyundai Shell Mobis WRT** 380; 3 **M-Sport Ford WRT** 172; 4 **Hyundai 2C Competition** 44.



NEXT EVENT

RALLY SPAIN 21 OCTOBER ISSUE

Can Evans keep up his fine form to stop Ogier taking the title in his final full season?



Van der Linde takes his Audi wheel-to-wheel with Lawson's Ferrari

Sin bin undoes van der Linde's win in title race

DTM
HOCKENHEIM (DEU)
2-3 OCTOBER
ROUND 7/8

Kelvin van der Linde drew level in the DTM standings with Liam Lawson thanks to a fine victory in the opening race at Hockenheim, only for a disastrous outing the next day to swing the title fight back in favour of the Red Bull Ferrari driver.

Having previously endured two punishing weekends at the Red Bull Ring and Assen, van der Linde needed to bounce back in Germany to get his championship challenge on track and prevent Lawson from extending his points lead any further. He made the first step in the right direction when he put his Audi R8 on pole position in Saturday qualifying, before converting that into a splendid six-second triumph as Lawson

came home a disappointing fourth.

Both Mercedes driver Maximilian Gotz and Lawson tried to undercut van der Linde in the pits by stopping early on lap five, but the South African hung on to the lead to bag a first win since the Nurburgring round in August, as both his rivals slipped outside the podium spots.

However, van der Linde undid all his hard work in Sunday's race when he tagged Lawson's Ferrari 488 into Turn 8 while trying to overtake him for second. The incident earned him a five-second penalty, which was doubled to 10s after he failed to serve the initial sanction during his pitstop. The Abt Sportsline driver crossed the line a lowly sixth, which became 10th after both reprimands were applied.

Lawson, meanwhile, cruised to second place in the AF Corse Ferrari, opening the gap back up to 14 points ahead of the season

finale at the Norisring this weekend.

Lawson and van der Linde are now set to engage in what is essentially a two-horse battle to be crowned DTM's first champion in the GT3 era after Walkenhorst driver Marco Wittmann scored a duck at Hockenheim. Struggling for one-lap pace all weekend in his BMW M6, Wittmann needed to climb a long way up the order to have any chance of scoring decent points. His outing in Saturday's race ended as a consequence of the damage he picked up in a collision between Lucas Auer and Arjun Maini on the opening lap, while a 5s penalty for a pitstop infringement meant he could only manage 11th place in the second race.

HRT driver Gotz still remains an outsider contender for the title after finishing fifth and third, holding off the fellow Mercedes of Philip Ellis and Daniel Juncadella in the second race. But with a 26-point gap between him and Lawson with just two races to run, a maiden title remains a long shot for the DTM returnee.

While the focus in the Hockenheim round was firmly on the title battle between van der Linde and Lawson, Auer produced a masterful drive in race two to score the seventh victory of his DTM career. A day after being taken out by an overambitious Maini while running in second place, Auer cleared polesitter van der Linde with ease into Turn 2 and never looked back, winning by 6.4s. While he isn't part of the championship fight, Auer can claim to be only the fourth driver to have won more than one race this campaign.

RACHIT THUKRAL



Kirkwood climbs Indy ladder

INDY LIGHTS
MID-OHIO (USA)
2-3 OCTOBER
ROUND 10/10

Kyle Kirkwood became the first driver to win all three categories on the Road to Indy ladder, after the 22-year-old American clinched the Indy Lights championship title at Mid-Ohio last weekend. But he made it look difficult in a strange and wet season finale, while Linus Lundqvist ended the campaign with an easy-looking third victory.

Despite needing only a top-11 finish



Kirkwood completes
his mesmeric US junior
single-seater ascent

to win the crown after leading from lights-to-flag in the opener, USF2000 and Indy Pro champion Kirkwood looked like he'd made it a little harder for himself during qualifying. He went off the track and damaged his front wing, leaving him fifth on the grid. Chief rival David Malukas of HMD Motorsports, meanwhile, took pole.

Then in the pouring rain Malukas dipped a wheel off the course at Turn 1 at the drop of the green flag and spun to the back of the pack, leaving 2018 BRDC British Formula 3 champion Lundqvist up top. Malukas battled hard to claw his way back up the field, while Kirkwood, who got past Devlin DeFrancesco on a restart to claim third early on, had a spin and went in the opposite direction to fall as far as sixth.

The real star was leader Lundqvist, who simply disappeared from his opposition, seemingly able to find the grippiest line around the 2.258-mile course to win by 10.6 seconds. Malukas had given chase to finish as the runner-up, while 10-time racer winner Kirkwood fell off the track at Turn 4 on the final lap and lost fifth to Danial Frost, but the latter was in generous mood and handed the place back to his Andretti Autosport team-mate and the newly crowned champion.

DAVID MALSHER-LOPEZ

WEEKEND WINNERS

DTM

HOCKENHEIM (DEU)

Race 1 Kelvin van der Linde
ABT Sportsline (Audi R8 LMS Evo)

Race 2 Lucas Auer
Winward (Mercedes-AMG GT3 Evo)

INDY LIGHTS

MID-OHIO (USA)

Race 1 Kyle Kirkwood
Andretti Autosport

Race 2 Linus Lundqvist
HMD Motorsports

24H SERIES

HUNGARORING (HUN)

Daniel Allemann/Ralf Bohn/Alfred Renauer
Herberth Motorsport (Porsche 911 GT3-R)

NASCAR XFINITY SERIES

TALLADEGA (USA)

Brandon Brown
Brandonbilt Motorsports (Chevrolet Camaro)

NASCAR TRUCK SERIES

TALLADEGA (USA)

Tate Fogleman
Young's Motorsports (Chevrolet Silverado)



For full results visit motorsportstats.com

Herberth trio extend 911's win streak

24H SERIES
HUNGARORING (HUN)
2-3 OCTOBER
ROUND 6/7

If a team has fielded anything other than a Porsche 911 GT3-R in the 24H Series this season, then frankly it's brought the wrong car to the fight as the rear-engined automotive icon maintained its 100% 2021 winning record in the championship's top class at the Hungaroring last weekend.

While GPX Racing and T2 Racing have each nicked the spoils on one occasion this term, the penultimate round of the seven-race season marked the fourth triumph for the Herberth Motorsport squad with its driver line-up of Daniel Allemann, Ralf Bohn and Alfred Renauer cruising to victory in the 10-hour contest by three laps.



Allemann/Bohn/Renauer
earned Herberth its fourth
win of the season

The second-starting crew got off to a messy start as, on the approach to Turn 1, the Porsche swept across the track to secure the apex and rammed into the side of the second-row-starting Mercedes-AMG GT3 Evo fielded by MP Racing.

But as the race wore on and strategies played out, the Herberth squad came to the fore and overcame another Merc, one entered by CP Racing, which had opportunistically pitted under a Code 60

caution to seize the early advantage.

However, Porsche proved the king of Stuttgart thanks to the Herberth trio's blinding pace towards the three-quarter mark deciding the race in their favour.

In the TCR division, the only other of the seven classes to feature more than one entry, the Volkswagen Golf GTI of Wolf Power Racing (Milos Pavlovic/Christoph Lenz/Jasmin Preisig/Emil Heyerdahl) earned the bragging rights.



Decisive first lap ensures Marquez remains the MotoGP king of Austin

MOTOGP
AUSTIN (USA)
3 OCTOBER
ROUND 15/18

Marc Márquez's record in the United States — winning all but one MotoGP race in the country since 2013 — and his form on anticlockwise circuits (amassing a haul of 29 career wins ahead of the Austin contest) gave him short odds at the bookmakers ahead of the Grand Prix of the Americas.

But victory in last Sunday's Circuit of The Americas encounter was far from certain for Márquez at the start of the weekend. Despite topping Friday practice, he admitted he didn't feel like he was riding the Honda very well, while the physical nature of the track mixed with its vicious bumps (which

many riders labelled dangerous) looked set to cause his still-recovering right shoulder problems.

As the event progressed, however, it became apparent that Márquez would be a force come the race. Strong on used rubber in Saturday's FP4 and qualifying on the front row for the first time since Jerez in 2020, Márquez had a clear plan in his mind: lead from the off, run slowly in the first laps and then pull the pin.

Step one was executed to perfection, the Honda rider carving past second-starting Fabio Quartararo and polesitter Francesco Bagnaia into Turn 1. During the opening laps, Márquez's gap to Quartararo hovered around four tenths, his lap times around the low 2m05s/high 2m04s as he gently bedded in his soft rear Michelin tyre

in the scorching Texan sunshine.

Then on lap seven Márquez deployed the final part of his masterplan. He fired in a 2m04.368s to lap over half a second quicker than Quartararo. His lead was now more than 1.5s and Márquez calculated that Quartararo wouldn't do anything reckless to jeopardise his championship lead. This allowed the Honda rider to ease clear, his gap opening up to over four seconds come the final tour.

As if winding back the clock to before his injury, Márquez showed no signs of cracking as he cruised to his second win of the 2021 campaign. But the way in which this victory was ultimately achieved shone a light on his current physical battles, as he admitted to not forcing his body when he felt bad on the bike on Saturday, which allowed him to be so strong come the race.

Quartararo — who reckoned he "felt more stress" ahead of the COTA race — had to fend off an early assault from a flying Jorge Martin on the Pramac Ducati, but by the end of lap eight of 20 had begun to put daylight between himself and the rookie, settling into a comfortable second.

With Bagnaia conceding that Márquez had stronger pace from the off, he rode gingerly in the early laps so as not to damage his soft rear tyre. Confident he could ride back up to the podium spots, he picked off a struggling Martin with three laps remaining.

Quartararo — who said his second place was the best runner-up spot of his career — now holds a 52-point lead and can win the





Dovizioso grabbed points as he adjusts to life on a Yamaha



Quartararo happy to finish in a comfortable runner-up spot

title at the next round at Misano, though he acknowledges he “doesn’t need to obsess” over this fact going forward. For Bagnaia’s part, he has ruled out getting overly aggressive to keep his slim title hopes alive.

A repeat of his 2019 Austin heroics wasn’t on the cards for Suzuki’s Alex Rins as traction issues meant he could do no more than battle to “survive” for fourth – a position he was gifted when Martin was hit with a long-lap penalty for a shortcut at Turns 4 and 5 late on.

Drama erupted behind this pair and involved Rins’s Suzuki team-mate Joan Mir. The reigning world champion clattered into Ducati’s Jack Miller at the Turn 15 left-hander on the final tour, which opened the door for in-form rookie Enea Bastianini to come through to sixth on his Avintia Ducati.

Mir crossed the line seventh ahead of a furious Miller but was demoted one spot for the incident. Mir later apologised for the contact but expressed frustration at the penalty and “doesn’t understand” it. The reprimand was immaterial, however, as the COTA race officially sounded the death knell on a title defence that never really got off the ground as a result of a lack of development from Suzuki across 2021.

Brad Binder on the KTM and Honda’s Pol Espargaro completed the top 10, while Andrea Dovizioso managed points in 13th on his second outing for Petronas SRT as he continues his learning process of the Yamaha bike.

LEWIS DUNCAN

RESULTS ROUND 15/18, AUSTIN (USA), 3 OCTOBER (20 LAPS – 68.512 MILES)

POS	RIDER	TEAM	TIME
1	Marc Marquez (ESP)	Honda	41m41.435s
2	Fabio Quartararo (FRA)	Yamaha	+4.679s
3	Francesco Bagnaia (ITA)	Ducati	+8.547s
4	Alex Rins (ESP)	Suzuki	+11.098s
5	Jorge Martin (ESP)	Pramac Ducati	+11.752s
6	Enea Bastianini (ITA)	Avintia Ducati	+13.269s
7	Jack Miller (AUS)	Ducati	+14.722s
8	Joan Mir (ESP)	Suzuki	+13.406s
9	Brad Binder (ZAF)	KTM	+15.832s
10	Pol Espargaro (ESP)	Honda	+20.265s
11	Miguel Oliveira (PRT)	KTM	+23.055s
12	Alex Marquez (ESP)	LCR Honda	+24.743s
13	Andrea Dovizioso (ITA)	Petronas Yamaha SRT	+25.307s
14	Luca Marini (ITA)	Avintia Ducati	+26.853s
15	Valentino Rossi (ITA)	Petronas Yamaha SRT	+28.055s
16	Iker Lecuona (ESP)	Tech3 KTM	+30.989s
17	Takaaki Nakagami (JPN)	LCR Honda	+35.251s
18	Danilo Petrucci (ITA)	Tech3 KTM	+42.239s
19	Franco Morbidelli (ITA)	Petronas Yamaha SRT	+49.854s
R	Aleix Espargaro (ESP)	Aprilia	8 laps-accident
R	Johann Zarco (FRA)	Pramac Ducati	5 laps-accident

Winner’s average speed 98.601mph. **Fastest lap** Marquez 2m04.368s, 99.159mph.

QUALIFYING 2 1 Bagnaia 2m02.781s; 2 Quartararo 2m03.129s; 3 M Marquez 2m03.209s; 4 Martin 2m03.278s; 5 Nakagami 2m03.292s; 6 Zarco 2m03.379s; 7 Rins 2m03.453s; 8 Mir 2m03.528s; 9 Marini 2m03.546s; 10 Miller 2m03.720s; 11 Binder 2m03.781s; 12 P Espargaro 2m03.875s.

QUALIFYING 1 1 Marini 2m03.410s; 2 Mir 2m03.540s; 3 Morbidelli 2m03.872s; 4 Dovizioso 2m04.044s; 5 A Marquez 2m04.100s; 6 Bastianini 2m04.118s; 7 Lecuona 2m04.324s; 8 Oliveira 2m04.392s; 9 A Espargaro 2m04.419s; 10 Rossi 2m04.699s; 11 Petrucci 2m04.829s.

RIDERS’ CHAMPIONSHIP 1 Quartararo 254; 2 Bagnaia 202; 3 Mir 175; 4 Miller 149; 5 Zarco 141; 6 Binder 131; 7 M Marquez 117; 8 A Espargaro 104; 9 Maverick Vinales 98; 10 Oliveira 92; 11 Martin 82; 12 Rins 81; 13 Bastianini 71; 14 Nakagami 70; 15 P Espargaro 70; 16 A Marquez 54; 17 Morbidelli 40; 18 Lecuona 38; 19 Petrucci 37; 20 Marini 30; 21 Rossi 29; 22 Stefan Bradl 13; 23 Michele Pirro 8; 24 Dani Pedrosa 6; 25 Lorenzo Savadori 4; 26 Dovizioso 3; 27 Tito Rabat 1; 28 Cal Crutchlow 0; 29 Garrett Gerloff 0; 30 Jake Dixon 0.

MANUFACTURERS’ CHAMPIONSHIP 1 Ducati 291; 2 Yamaha 282; 3 Suzuki 197; 4 KTM 185; 5 Honda 173; 6 Aprilia 105.



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WEEKEND WINNERS

MOTO2

AUSTIN (USA)

Raul Fernandez
Ajo Motorsport
(Kalex)

MOTO 3

AUSTIN (USA)

Izan Guevara (below)
Team Aspar
(Gas Gas)



NEXT REPORT

EMILIA ROMAGNA 28 OCTOBER ISSUE

With three wins and a further brace of MotoGP podiums at Misano, Marquez has a strong track record at the Italian venue. Can he stitch together a late run of form as Bagnaia (left) seeks to keep his title hopes alive?

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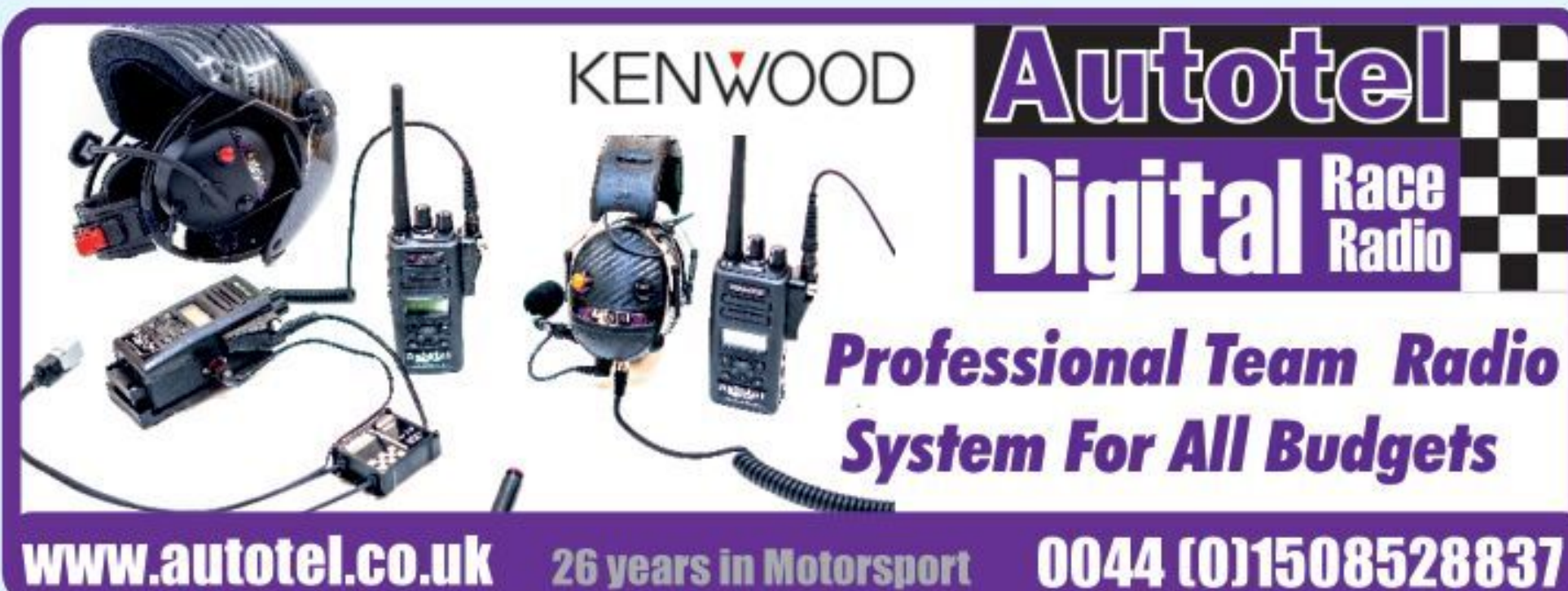
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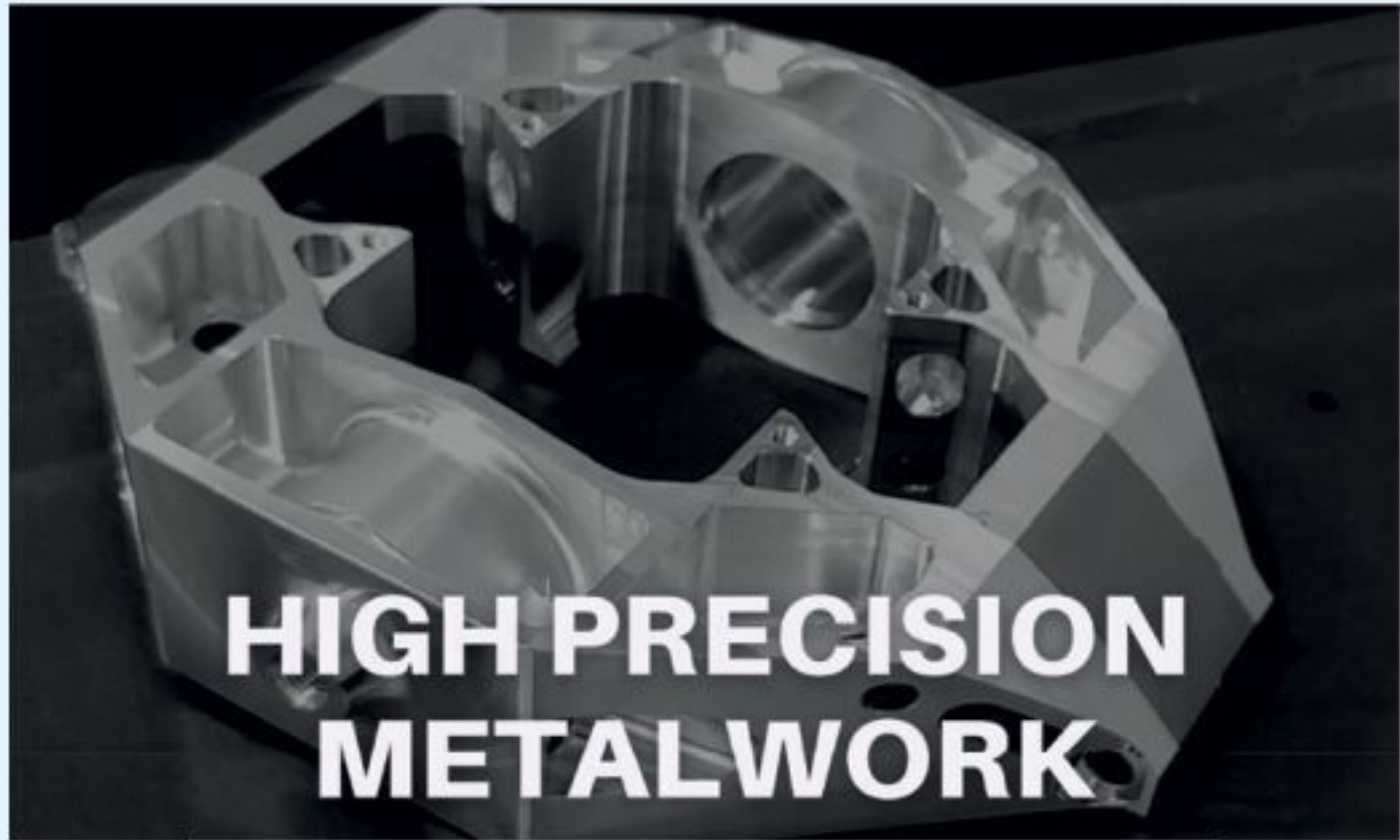
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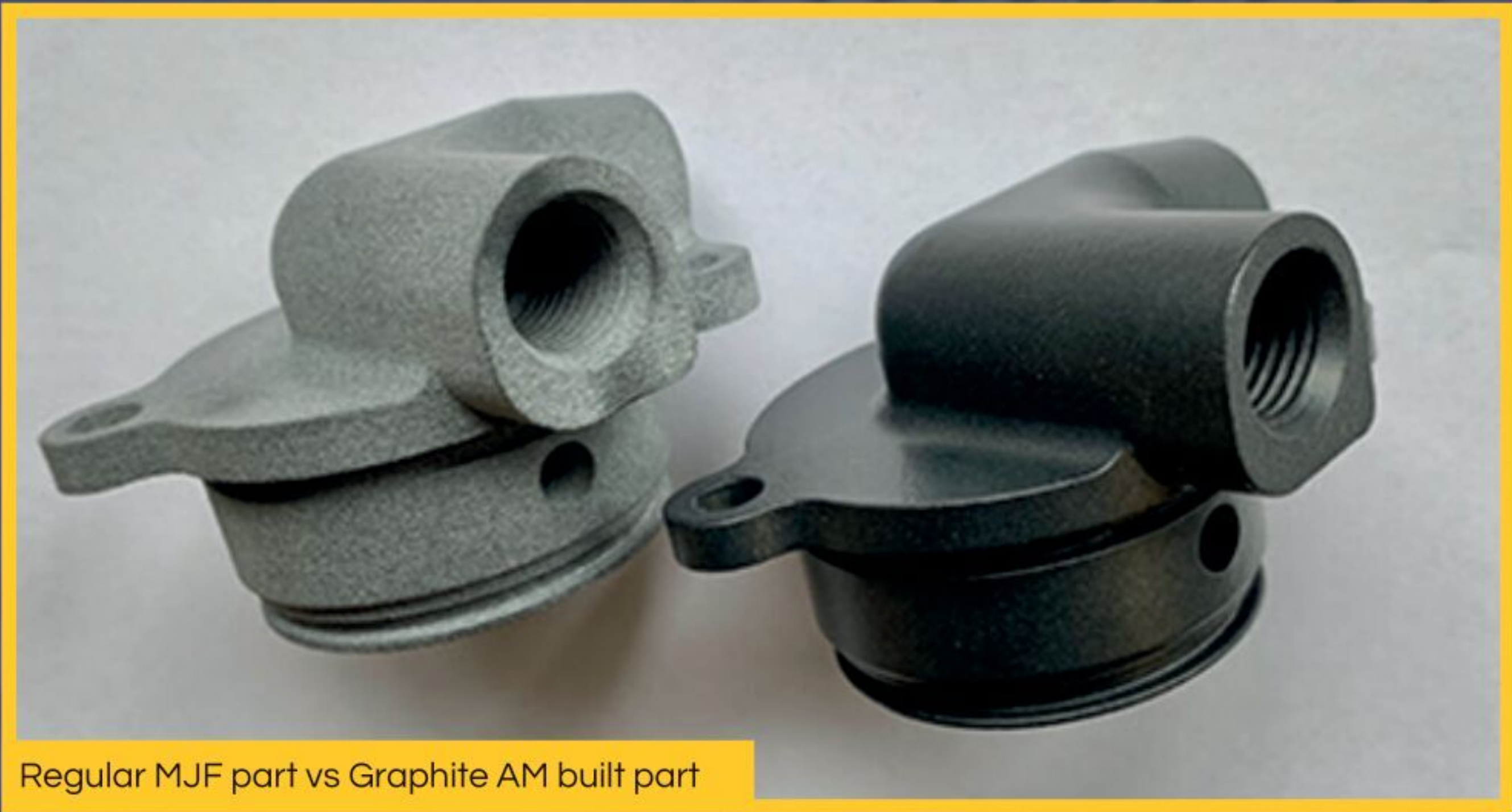
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BRITISH F4 Virtuosi among initial seven teams to commit

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Team will return to the GT3 ranks and has already had interest from drivers



CENTURY TO BE FIRST UK TEAM TO RUN NEW GT3 BMW

BRITISH GT

Century Motorsport will become the first UK team to run the new BMW M4 GT3 in the British GT championship next year.

In addition to fielding its two M4 GT4s in 2022, the long-time BMW customer squad also plans to contest a parallel programme with the M4 GT3 in the Creventic-run 24H Series, and has placed an order for a second GT3 car with a view to entering the Dubai 24 Hours in January.

Nathan Freke's team, which secured the GT4 drivers' and teams' titles with a round to spare at Oulton Park last month, last competed in the GT3 class with a pair of venerable BMW M6 GT3s in 2019. Two third places for Jack Mitchell and Angus Fender at Brands Hatch and Donington Park were its best results.

Freke plans to test the M4 – which has contested two race distances in the Nurburgring Langstrecken Serie (NLS) – himself at Valencia in the coming weeks, but said he was already convinced “that

it's going to be the right bit of kit” for the team to be a leading contender.

“We were getting inquiries about whether we were going to run the car or not and obviously the desire was there,” Freke told Autosport.

He said the investment made to expand its operations in 2019 to run two GT3 cars alongside its pair of GT4s – “we effectively set up a completely new team for the M6s” – means it is well-placed for 2022.

“We already have 90% of the stuff, so we are ready to go,” Freke said. “I believe we can provide a service as good as anybody. We always put 100% into it and BMW are very happy with what we do.”

Freke added that drivers have already approached him about racing in GT4 next year, and anticipates “some customer retention”.

“I'm confident we should be able to get this nailed down quite quickly,” he said.

JAMES NEWBOLD

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GINETTA REGULAR WHITE BACK TO BRITISH GT IN G56

BRITISH GT

Ginetta regular Colin White will make his British GT return at Donington Park next weekend in the marque's G56 GT4 car as a precursor to a full-season campaign in 2022.

The 65-year-old, who is on course to successfully defend his GT4 Supercup Pro-Am title with six races to go, will make his first start in the series since 2014 in a guest appearance for CWS Racing alongside factory driver Mike Simpson.

A single G56, which will take over from the G55 in the GT4 Supercup next year as the primary class contender, has been entered in British GT this season by Assetto Motorsport and was only denied victory on its debut at Brands Hatch by a puncture.

White said he had “only heard good things about the new car” and was eagerly awaiting his return. “We've made it clear to SRO that Donington is very much a precursor to CWS rejoining British GT full-time next season,” he said. “But it's also an opportunity to see how much the series has changed over the past seven years.”

“I'm under no illusions about the level of GT4 or the other Pro-Am crews we'll be up against, but I'm also hopeful we can hit the ground running.”

JAMES NEWBOLD



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Virtuosi joins British F4 for 2022 campaign

BRITISH F4

Formula 2 squad Virtuosi Racing is among the initial batch of seven teams to have ordered cars to compete in British Formula 4 next season.

The series is undergoing a major revamp for 2022, with British motorsport governing body Motorsport UK taking over as organiser and a new Tatuus-Abarth chassis/engine combination being introduced for when the second generation of FIA F4 machinery becomes available.

Virtuosi has powered Guanyu Zhou to second in the current F2 points table and has finished runner-up in the teams' standings in the past two campaigns. It is the latest squad to join the series for next year – following Hitech GP and Chris Dittmann Racing – and the switch to the Tatuus car was a key factor in Virtuosi's decision, as it brings the British series in line with many of the European F4 series.

"It's something we've been thinking about internally for a while," said a team insider. "When the likes of Prema have



got F4, F3 and F2, they've got the structure to take the drivers through from a young age, and it makes sense to get the drivers from the beginning.

"F4 in Britain at the moment is like something out of the 1990s, and with the Mygale it's been set back in time. The fact that they're joining the rest of the world puts us on a level playing field with everyone else."

Current British F4 squads Carlin, Argenti Motorsport, Fortec Motorsport and JHR Developments have also placed orders for the new cars. Carlin has revealed that it plans to use the machinery first in the UAE F4 Championship over the

winter and Autosport understands that others could follow suit.

Michael Meadows, boss of the Argenti team that runs British F4 points leader Matias Zagazeta, says it is a boost for the series to have teams such as Virtuosi join.

"I think it's always a nice thing when you see more cars in more different liveries," he said. "There's been a lot of interest because of the new car and it's created some excitement. Everyone likes a new toy – it's the biggest change there's been for a long time, so it's worth shouting about and hopefully it will pull in a lot of drivers."

MARCUS SIMMONS & STEPHEN LICKORISH

Palmer eyes Festival outing after move to FF1600



FORMULA FORD

Former British Touring Car Championship racer Derek Palmer has ended a three-year break from racing with plans to contest the Formula Ford Festival at Brands Hatch at the end of this month.

The 34-year-old raced in the BTCC in 2015, as

well as the inaugural TCR UK season in 2018, but is now enjoying the challenge of learning about single-seater racing under the wing of Graham Brunton. Previously, all his racing has been in saloon and GT cars as he followed in the wheeltracks of his father.

Palmer started his single-seater sojourn

earlier this summer in a Swift SC92F, but has recently raced a Ray GR10 from Brunton's team.

"It's a toe in the water, this is just for fun," said the Scotsman, who now lives and works in Switzerland. "But, if another touring car opportunity came up, I'd jump at it."

PAUL LAWRENCE

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Thompson to join Mini grid with Jamsport

MINI CHALLENGE

Former British Touring Car racer Bobby Thompson will join the Mini Challenge grid for the final two rounds of the season.

Thompson's sole race outing since a major BTCC crash at Croft last year was in Mighty Minis at Brands Hatch in August, but he is now due to race the modern JCW Mini at Donington Park this weekend for Jamsport.

He has a long connection with the team, having previously raced for it in Fiesta Junior and later acted as its chief instructor. He is set to be joined by last year's Irish Fiesta ST champion Alex Denning in a two-car line-up.

"I am proud to be back racing with Jamsport but this time in the Mini Challenge," said Thompson. "I have been working closely with



Jamie [Going, team boss] for the past couple of years and can't wait to be racing for him again."

Going added: "Bobby was one of my first junior drivers in Fiestas and he's been in and around the team for a long time. We want to win – we're not doing it for any other reason, but we don't want to get in the way of other people's championships."

STEPHEN LICKORISH



Rallye Prescott to return after successful maiden event

HILLCLIMB

Prescott will have a regular event dedicated to rallying following the success of last weekend's first Rallye Prescott.

The famous Gloucestershire hillclimb venue held a competition for rally cars on Sunday, with the Mitsubishi Lancer E6 of regular hillclimber Stephen Moore finishing fastest. Best of the regular rally cars was the older E3 of Lee Kedward, while Steve Harkness, who drove his Ford Escort Mk2, thrilled with his sideways style.

Following the trial fixture, Prescott

general manager Gemma Price has plans to develop and grow the event. "We're very happy with today," she said. "This was very much the start of an event that can grow, and a date in the autumn next year is already in the calendar."

Drivers reported an enjoyable event at a relatively low cost, albeit with a lot less seat time than they are used to. The contest comprised three practice runs and two timed runs on the 1127-yard course at a venue that offers options to develop the competition layout in future years.

PAUL LAWRENCE

IN THE HEADLINES

INGRAM'S GT CUP RETURN

British Touring Car Championship star Tom Ingram made a return to the GT Cup at Snetterton, sharing an FF Corse-run Ferrari 488 GTC with Ron Johnson. "I did one race with Ron last year at Donington in the GT4 Supra and before that I shared a Ferrari 458 with Marcus Hoggarth in 2015," he said after they finished fourth in class in the final race.

TRIBUTE TO WALKER

The Scottish Motor Racing Club will hold a Classics race in memory of Andy Walker at its Knockhill meeting this weekend following his death earlier this year. Walker competed during 2005-2006 in a series of races that led to the Scottish Classics Championship being established in 2007, before racing in the new series for a number of years.

HILLCLIMBERS MIGRATE

A team of 17 drivers from British hillclimbing, led by 2021 British champion Wallace Menzies, will compete in this weekend's FIA Hillclimb Masters event at Braga in Portugal. Seven of the final British top 10 runners will make the trip, backed up by leading drivers from across the classes including top Under 25 driver Tom Weaver (Van Diemen RF91) and leading female hillclimber Olivia Cooper (Force TA). The three-kilometre route runs on part of the famous 'Rampa da Falperra' course.

BHD SPECIAL BACK OUT

The BHD Special (below), created by Basil Hope Davenport around 1925 and sand-raced at Southport, broke a 10-year sabbatical in the Freddie Giles Memorial race at Castle Combe on Saturday. Rebuilt by Davenport, who had re-acquired it in the 1950s, the GN-based confection was raced and hillclimbed in the 1970s by Robin Parker. James Parker was aboard for its return, but retired from the race.





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Ford GT40s were the cars to have at Spa. Bryant/Cottingham lead on way to a top-five lockout

Bryant and Cottingham survive gearbox woes to triumph in GT40

SPA SIX HOURS ROADBOOK 1-3 OCTOBER

Goodwood Revival stars Oliver Bryant and James Cottingham ticked the Spa Six Hours crown from their 'to win' list last weekend, driving the Bryant family's Ford GT40 to a one-lap victory over the similarly mounted Craig Davies/Mike Jordan/Andy Newall and Richard Meins, Chris Lillingston-Price/Andrew Bentley crews. Bryant and Cottingham triumphed against the odds, for fourth gear stripped 25 minutes into Bryant's marathon opening stint. Following the podium ceremony, the ZF 'box seized!

Having watched runaway poleman Frank Stippler straight-line the Les Combes chicane on lap one in 2018 victor Marcus Graf von Oeynhausen's GT40, then spin at the Bus Stop – due to fuel leaking onto the front tyres, which erupted when Stippler pitted after eight laps – Bryant was content to let Nicky Pastorelli go in David Hart's GT40, although the Dutchman attracted a drivethrough penalty for exceeding track limits. That car was sidelined when second driver Olivier Hart selected reverse gear at the fuel station and couldn't disengage it.

Meanwhile, Bryant had acclimatised himself to the missing cog. "Jumping from third to fifth and back wasn't great, but enabled us to save a huge amount of fuel, a lap's worth for every 10, in a race with only three safety cars," he said.

In a race which, unusually, only featured light rain in the final minutes, there was another shock in store for Bryant. Tony Wood, heading for a probable second with Miles Griffiths, crashed his GT40 at Pouhon. He nursed the car back to the pits, but lost part of its damaged body en route and Bryant collected it. "It took out my spotlamps and I felt sure it must have done the radiator, so I watched the temperature gauge like a hawk," he said. "Fortunately the needle didn't move!"

Travel and non-EU transport logistics, which meant Six Hours starters were down 20%, hit the other races too. One grid that did well, though, was Historic Formula Junior in which Alex Ames and Manfredo Rossi di Montelera, guesting in Andrew Beaumont's Lotus 22, won a race apiece in the company of Mark Shaw (Brabham BT6). Kieft racer Nic Carlton-Smith secured the UK title, but former powerboat racer Stuart Tizzard (Cooper T56) almost ended his unbeaten class run in Sunday's wet stanza.

Rossi also aced the Masters Historic Sportscar event in an Abarth-Osella PA1, beating Tom Bradshaw (Chevron B19) after flat batteries stopped Bryant's and Olivier Hart's Lola T70s. Will Nuthall (Cooper T53) and single-seater returnee Phil Keen – the 2002 Formula Renault UK racer in Beaumont's UDT/Laystall Lotus 18 – earned Historic Grand Prix Cars Association glory. Thin Historic F1 fields were topped by Jamie Constable's Tyrrell 011 and Michael

Cantillon's Williams FW07C. Constable also featured in the Endurance Legends races, won by Shaun Lynn's Peugeot 908, the opener from son Max (BR01).

Justin Maeers (GN Parker Special) and winners Fred Wakeman/Pat Blakeney-Edwards (Frazer Nash) enthralled onlookers in the Pre-War race before the Six Hours.

JURGEN STIFTSCHRAUBE

WEEKEND WINNERS

SPA HISTORIC SIX HOURS

Oliver Bryant/James Cottingham (Ford GT40)

HISTORIC FORMULA JUNIOR

Race 1 Alex Ames (Brabham BT6)

Race 2 Manfredo Rossi di Montelera (Lotus 22)

MASTERS HISTORIC SPORTSCARS

Manfredo Rossi di Montelera (Abarth-Osella PA1)

HISTORIC GRAND PRIX CARS ASSOCIATION

Race 1 Will Nuthall (Cooper-Climax T53)

Race 2 Phil Keen (Lotus-Climax 18)

MASTERS HISTORIC F1

Race 1 Jamie Constable (Tyrrell 011)

Race 2 Michael Cantillon (Williams FW07C)

MASTERS ENDURANCE LEGENDS

Races 1 & 2 Shaun Lynn (Peugeot 908)

MRL PRE-WAR SPORTSCARS

Fred Wakeman/Patrick Blakeney-Edwards (Frazer Nash TT Replica)

MRL HISTORIC TOURING CAR CHALLENGE

Race 1 Ric Wood/Jake Hill (Nissan Skyline)

Race 2 Simon Garrad (Nissan Skyline)

MASTERS PRE-'66 TOURING CARS

Richard Dutton (Ford Lotus Cortina)

MASTERS GENTLEMEN DRIVERS

Roy Alderslade/Andrew Jordan (AC Cobra Daytona Coupe)

MRL WOODCOTE/STIRLING MOSS TROPHY

James Cottingham/Harvey Stanley (Tojeiro-Jaguar)

For full results: roadbook.alkamelsystems.com

Cantillon's Williams was a Historic F1 winner at Spa



Leader Waterfield was in a class of his own in atrocious conditions at Castle Combe



Waterfield splashes his way to 500cc F3 victory

CASTLE COMBE
CCRC AUTUMN CLASSIC
2 OCTOBER

Tom Waterfield demonstrated considerable prowess in defending his Freddie Giles Memorial Frazer Nash title at the 10th Castle Combe Autumn Classic. His other victory, aboard Tim Ross's ex-Jim Russell Cooper-Norton Mk9, was poignant, since British Formula 3 champion Russell won the 500cc standalone race 66 years ago, the last such contest at the venue until 2014.

That meeting, on 1 October 1955, marked a high in Combe's history. Huge crowds flocked to see Franco-American Harry Schell (Vanwall) win the Avon Trophy F1 feature race and the Empire News Trophy Formule Libre finale from Ron Flockhart's shrieking BRM V16, but there was a bitter aftertaste. The International fixture incurred losses and, while motorcycle meetings continued, it

was the venue's last car event until 1962.

The following year AFN Ltd, Frazer Nash cars' parent company, leased the circuit to ensure its continuation, thus the annual race for Archie Frazer Nash's charismatic machines and GN (Godfrey Nash) cars remembers FN Car Club captain Giles.

Waterfield's victory, in mother Jo's 1500cc Meadows-engined Super Sports this time, was as compelling a display of control for sodden onlookers as his Cooper win.

On pole by 9.7 seconds on a treacherous surface, Waterfield might have been expected to lap the 500cc field. Driving precisely, the 23-year-old led by 5.3s after a lap, then tempered his instinct to charge but still won by 17.5s. "I love these conditions, but got my head down and didn't look back," he said. "I couldn't see anything and the shiny track made it difficult to tell deep water from puddles."

Healey racer Martyn Corfield (Cooper Mk8) was Waterfield's closest pursuer,

chased by Alex Wilson (Mackson-Norton), who shot from sixth to third at the start. Behind 2017 winner Darrell Woods (Staride-Norton), fifth for Wilson's father Chris secured the 500 Owners' Association race series title in his Guernsey-flagged Cooper Mk10.

Buoyed by stepfather Simon Blakeney-Edwards's 1.2s victory over Tim Kneller (Riley TT Sprite) in the Vintage Sports-Car Club's Owner-Driver-Mechanic race for pre-war machines, which lost front-row qualifier Clive Fidgeon's Boulogne II after practice, Waterfield lined up seventh of 23 chain-gangers for the season's Frazer Nash showpiece. The event had even attracted James Parker's BHD GN, out for the first time in a decade.

Within a lap, Waterfield was challenging poleman Dougal Cawley, and snaked ahead when his rival's GN 'Piglet' threw its fourth gear chain "down a rabbit hole". Even without third gear, Waterfield beat David Wylie's two-litre Super Sports by 46s. Late entrant Blakeney-Edwards threaded his Super Sports from the back, ousting Tom Walker's GN-Ford 'Big Yellow' from third.

Synchronised swimming and pitstops enabled Austin-Healey 3000 owners Mark Holme and an ecstatic Doug Muirhead to finish 1-2 in the 90-minute GT & Sports Car Cup. Jeremy Welch started Muirhead's TON 792 and drove a short middle stint in Holme's ex-John Gott SMO 746. "It was brutal just to get to the end," said Holme, last year's Thruxton winner.

After a full-course caution while marshals cleared an incident at Camp (spinner Alice Locke's MGB was unavoidably clobbered by Mark Martin's Lotus Elan 26R), Mark Williams (AC Cobra) completed the podium.



ALL PHOTOGRAPHY: READ

WEEKEND WINNERS

500cc F3

Tom Waterfield (Cooper-Norton Mk9)

VSCC PRE-WAR SPORTS-CARSSimon Blakeney-Edwards
(Frazer Nash Super Sports)**FREDDIE GILES MEMORIAL TROPHY**

Tom Waterfield (Frazer Nash Super Sports)

GT & SPORTS CAR CUP

Mark Holme/Jeremy Welch (Austin-Healey 3000)

FISCAR HISTORIC INTERMARQUE

Oliver Llewellyn/Tim Llewellyn (Allard-Cadillac J2)

JEC NORMAN DEWIS MEMORIAL TROPHY

Richard Butterfield/James Dorlin (Jaguar Mk2)

VSCC ALLCOMERS

Dougal Cawley (GN/Ford 'Piglet', below)

For full results visit: tsl-timing.com

Tim and Laurence Jacobsen's pilgrimage from Scotland was rewarded with a fine GT2 victory in their MGB.

Oliver Llewellyn and father Tim hydroplaned their Allard-Cadillac J2 from the back to FiSCaR Intermarque victory. David Alexander was a lap away from a maiden win when Llewellyn Sr thundered past the Lotus Elite at Folly. Marc Gordon (Jaguar XK150S) watched it unfold, clear of John Ure/Nick Wigley (ex-Tony Crook Cooper-Bristol T24/25) in third.

In a Norman Dewis Memorial Trophy Jaguar race unusually without C, D or E-types — due to the Spa Six Hours clash — Richard Butterfield and James Dorlin outran John Young (Mk1) and Grant Williams (Mk2) in their Mk2. When Williams slowed, Tom Barclay (Mk1) completed the podium.

Having re-chained 'Piglet', Cawley grabbed VSCC Allcomers victory over Tom Walker, whose magnificent Amilcar Hispano-Suiza's engine note lost its early crispness. James Painter (MG Kayne Special) took third in his first wet race after brother Harry retired his MG PA.

MARCUS PYE

BJR 1 BACK ON TRACK WITH BROUGH Although the production racing car industry-defining Cooper Car Company and rival Kieft did much of the winning, there were dozens of one-off designs in Formula 3's 500cc era of the 1950s. One British owner/driver/constructor was Brian Rowsell, who raced his JAP-powered BJR 1 in 1956. Rowsell raced it through to 1960, mainly at Brands Hatch and Crystal Palace. Long used in speed events, his brainchild is back on track with Michael Brough.



CONNAUGHT STREAMLINER Derived from Connaught's shapely A-type single-seaters, ALSR 11 was the first of two streamlined sportscars powered by 1500cc Lea-Francis engines. It competed at two Combe meetings in period with John Coombs in 1954 and Les Leston in 1955. Stirling Moss raced it twice, winning his class in both the Coupes du Salon at Paris's Montlhéry speedbowl in 1954 and Oulton Park in 1955. Current custodian Paul Griffin finished ninth in the FiSCaR race on Saturday.



MARSHALL'S SPECIAL JAGUAR DRIVE Gregor Marshall enjoyed a poignant but ultimately frustrating day at Castle Combe, sharing Simon Lewis's 1959 Jaguar Mk1, which his father Gerry raced at Mallory Park in 1977. Marshall Jr qualified in very wet conditions, but did not race it — the crankcase oil-breather pipe blew off, smothering the engine bay, during Lewis's opening stint in the Norman Dewis Memorial race.

Equipe breaks from the norm for Super Sprint

SILVERSTONE
ECR SUPER SPRINT
2 OCTOBER

It's always refreshing to see race organisers try new ideas that are different to the norm. And that's exactly what Equipe Classic Racing did for its first ever standalone meeting at Silverstone last weekend, devising a unique 'Super Sprint' format for the event.

None of Equipe's regular categories for 1950s and 1960s historics are championships and, therefore, its final event of the season risks becoming much like any other. With no added drama of a title on the line, there would be nothing extra special about that last fixture. And that's why ECR partner Rob Cull devised the new format – to add some “energy” to the curtain closer.

It draws similarities to a rallycross-style knockout event, where a number of heats all lead up to a grand final. Except the Super Sprint is not a knockout. Part of the ethos of Equipe is inclusivity and therefore all the drivers entered had the chance to take part in each of the four rounds.

This began with qualifying, where the field was randomly divided into four groups. Whether a driver was in the top or bottom half of the timesheet then determined if they would progress into the faster or slower side of the event. Rounds two and three featured four 10-lap races, where again the top half progressed in a different direction to the bottom, and it then all culminated in four finals, where drivers and cars of a similar performance would be competing against each other.

Cull says one of the key benefits of the format is that it allows drivers who would normally be nowhere near fighting for poles and podiums the chance to shine and run at the head of the field. “The



really exciting thing is we've got 12 trophies and nine of those could be going to people who may never have finished on the podium before,” he said after qualifying. “I remember the first time I was on pole and that feeling and adrenalin. There will be people experiencing that this weekend and they may have been racing for many years.”

Cull admitted there were a few “nerves” about introducing something new, but these were soon eased by the lack of questions in the driver briefing, despite the unusual timetable! He believes it's important for organisers to experiment, but admits Equipe has got a better chance to do so now that it's branching into booking track time for its own meetings for the first time, enjoying administrative support from MotorSport Vision Racing for this initial foray. “We're lucky we can now take our own event but, if you're in collaboration with another club, you wouldn't get time to do this,” he said.

Sixty-two drivers in cars eligible for Equipe's regular series – GTS, 50s, Pre-'63

and Libre – took the plunge and competed at a very wet Silverstone. It was an impressive number considering that the clashing Spa Six Hours and Castle Combe Autumn Classic limited the pool of racers. MGBs were common among the entry, but there was some more unusual machinery in action too, such as Andrew Davenhall's magnificent Austin A105/6 (which even had the chance to start one of the heats from pole) and Richard Gane's Jowett Jupiter.

Drivers very much got into the spirit of the event, with Tony Bianchi – winner of the fastest final – among those praising the Super Sprint. “It was really good fun – it keeps you on your toes,” he said. MG Trophy champion Sam Kirkpatrick, who is now increasingly racing an MGB, added: “It feels like I'm back in karting with heats and a final! It's interesting because of all the different types of car.”

Another of the frontrunners was Andrew Smith in his Cooper Monaco, and he was tempted out having hardly raced since the pandemic struck. “It's good value for money, and the people are lovely – and that makes a difference,” he said.

And regular Equipe GTS race winner Tom Smith even admitted the format “worked better than anyone ever expected”. “It's all flat-out racing – we're used to longer races so it's a different mindset,” he continued.

To receive such positive reviews for an event held in such miserable weather is a strong sign. Next year is a big one for Equipe Classic Racing as it plans to organise many more of its own events and introduce other fresh ideas. And the Super Sprint has all the ingredients of becoming a popular part of the club's exciting future.

STEPHEN LICKORISH



Davenhall's Austin A105/6 was one of the more unusual cars in action



Each driver had the chance to take part in a 15-minute qualifying, two 10-lap heats and then a final

WEEKEND WINNERS



EQUIPE SUPER SPRINT

Race 1 Richard Lawson (MGA)

Race 2 Paul Eales (MGB)

Race 3 Rick Willmott (Jaguar E-type)

Race 4 Andrew Smith (Cooper Monaco)

Race 5 Jamie Mason (Turner Mk2)

Race 6 Gavin Crawford (MGB)

Race 7 Mark Ellis (MGA Twin Cam)

Race 8 Tom Smith (MGB)

Final 1 Richard Lawson (MGA, above)

Final 2 Pete Shepherd
(Austin-Healey Sebring Sprite)

Final 3 Richard Hywel Evans
(Austin-Healey 3000, below)

Final 4 Tony Bianchi (Farrallac Mk2)



For full results visit: tsl-timing.com

CRACKING FINAL CONTEST BETWEEN BIANCHI'S FARRALLAC AND SMITH'S MGB



Grunt won out in the final battle, despite Smith's (left) best efforts

A wet track can be a great leveller and so that proved in the quickest of the finals of the Super Sprint event, as Tom Smith's MGB took on Tony Bianchi's Farrallac Mk2 in a thrilling contest. The rain negated some of the advantage of Bianchi's 6.4-litre Cadillac-engined sports-racer, and Smith's spectacular driving style with the humble 1.8 litres of the MGB meant it went down to the wire.

Track conditions had improved slightly for this race, but it was very much borderline an hour earlier whether the finals would be held amid the unrelenting rain. That question was put to the drivers and the overwhelming feeling was to press on, with just a few electing to sit out proceedings.

Bianchi said it had been "seven or eight years" since he last raced the Farrallac in the wet and it therefore took him a few laps to progress from 10th on the grid. But there were no such problems for wet weather specialist Smith. On the ragged edge from the start, he stormed from ninth to lead on the opening tour, and began to pull away. By the time Bianchi had powered up to second on lap three, Smith was six seconds clear. "But I could see him [Bianchi] coming!" he admitted.

Sure enough, the Farrallac was looming large. Two laps later, it was right on the MGB's tail, before blasting past on the Wellington Straight, Smith saying he could feel his MGB briefly wobble as the V8 thundered ahead.

But Smith did not give up. A few late errors from Bianchi meant Smith – who had earlier won his round-three race – finished less than a second behind, but was ultimately unable to quite launch a fightback.

"It's a great car – I haven't driven it for a couple of years," said Bianchi, who said

the trick to taming the power was to "leave it in top gear and never change down". "But I didn't think I could beat a good MGB with a good MGB driver in these conditions."

Andrew Smith's Cooper Monaco was third, having struggled with the car's light front-end in the opening stages before progressing onto the podium, while Nick Matthews's little Austin-Healey 100/4 was an impressive fourth.

While the quickest final was a thriller, the second final – for the fastest of the slower half of the field – was also a cracker. Pete Shepherd used the nimbleness of his Healey Sebring Sprite to fight his way into the lead on the opening lap. But he was never able to build a comfortable advantage, and Tom Woodcock's MGB closed in after passing Gavin Crawford's similar car when he had a moment at Luffield. Shepherd and Woodcock went side by side on the final lap, but the Healey just stayed ahead on the drag to the line.

The first final was won by Richard Lawson's MGA, which was briefly passed by Paul Eales's MGB before it cried enough, while Richard Hywel Evans was the class of the field in the third final in his Healey 3000.

STEPHEN LICKORISH



Woodcock challenges Shepherd on run to the line



Stoten inches ahead of Law from the start. Two wins gave him the crown

Stoten seals Sports 2000 title with double victory

**SNETTERTON
MSVR
2-3 OCTOBER**

Tom Stoten claimed his third overall Sports 2000 title thanks to firing his Gunn TS11 to a brace of wins at Snetterton last weekend.

Josh Law (MCR S2) was never headed in the wet first race, in which he was initially chased by Stoten from the MCRs of outgoing champion Michael Gibbins and Dominic Lesniewski. As Law's lead grew, the duel for second intensified, until Richard Johnson split Stoten and Gibbins on lap three and clinched second into Agostini on the final lap. Gibbins claimed third over Stoten.

It was dry for the second race, and Stoten took a lights-to-flag win, with Law in second throughout. Gibbins spent a number of laps challenging Lesniewski for third and made it through exiting Wilson on lap five of 11. Lesniewski was running on his own

when he slipped up at Agostini on the last lap, which allowed Timothy Tudor to take fourth in another MCR.

Stoten secured his second win in a restarted finale, leading from the opening lap and defending throughout from Law. Gibbins was a solitary third and the MCR of Johnson completed the top four.

Peter Morris and James Caley split the victory spoils in the Porsche Club contests. Race one started in the dry, with Morris in charge, while title contender Simon Clark got it all wrong at Agostini and forced Mark McAleer onto the grass in avoidance.

McAleer still managed to oust Morris on the opening lap, with Chris Dyer and Caley third and fourth, before McAleer was forced into the pits with a puncture two tours later. Morris was left in charge until Dyer's Cayman challenged, before it became a four-car battle with Jake McAleer's Cayman joining Caley's 997.

Dyer was ahead as they completed lap six of 10 but, as he exited Wilson, Morris was alongside again and was ahead out of Turn 3. As his lead grew to become decisive, Dyer and Caley were able to consolidate second and third. McAleer Jr was the loser, with Kevin Molyneux demoting him to a distant fifth, ahead of Richard Ellis.

It was very wet for the second race, and Caley mastered the conditions with a lights-to-flag victory, while Dyer and Ellis (996) both held station to complete the podium. Morris had been fourth from the opening lap, but soon had McAleer Sr and Clark closing in, both relegating Morris's 997 on lap six.

Ben Powney's Jedi was a double winner in the Monoposto Tiedeman Trophy. In a restarted race one, Nikita Abramov's similar Jedi held the narrowest of advantages for three laps, before Powney powered ahead past the pits. Gradually Powney pulled away, while Mark Betts (Jedi) lost out to Karl O'Brien (Leystone) for third on the last lap. The Dallara F301 of Lee Fern was fifth, after Dan Gore's Jedi pitted with a misfire.

Powney led from the opening lap of race two and, after two initial safety car laps, soon shook off Abramov's challenge. Betts took third. After holding fourth from start, Jedi pilot Max Windheuser was forced to surrender to O'Brien on the last lap.

After a safety-car start on the wet track, Scott Parkin led the Trackday Championship encounter in his VW Golf TDI until lap six of 14, when Justin Roberts's Honda Civic Type R took charge. The compulsory stops were made during a second safety-car period, and Roberts rejoined with his lead intact. From the green flag, both made good their escape



Morris leads the Porsche Club pack on his way to race-one triumph

WEEKEND WINNERS

SPORTS 2000

Race 1 Josh Law (MCR S2)

Races 2 & 3 Tom Stoten (Gunn TS11)

PORSCHÉ CLUB

Race 1 Peter Morris (997 C2S)

Race 2 James Caley (997 C2S)

MONOPOSTO TIEDEMAN TROPHY

Races 1 & 2 Ben Powney (Jedi Mk6/7)

TRACKDAY CHAMPIONSHIP

Justin Roberts (Honda Civic Type R)

TRACKDAY TROPHY

Scott Parkin (Volkswagen Golf TDI, below)

HERITAGE FF1600

Ben Cochran (Van Diemen LA10)

911 CHALLENGE

Races 1 & 2 Robert Hollyman (Porsche 964)

GT CUP

Race 1 Steve Burgess (Radical RXC)

Race 2 Charlotte Gilbert (Marcos Mantis)

Race 3 Sam Neary (Mercedes-AMG GT3)

Race 4 Morgan Tillbrook/Marcus Clutton
(McLaren 750S GT3)



For full results visit: tsl-timing.com

for a two-lap sprint to the finish, and Roberts held on by 0.413 seconds.

Dylan Brychta's SEAT Ibiza was first on the road in the Trackday Trophy but, with the chequered flag shown after only 26 of the planned 45 minutes, he hadn't made his compulsory stop and was given a penalty in lieu, dropping him to fourth. Brothers Scott and Ryan Parkin – in VW Golf and Audi TT respectively – were promoted, with Sam Gay/Colin Tester (Honda Integra) third.

It was an easy win for Ben Cochran's Van Diemen LA10 in Heritage Formula Ford, but there was a brilliant scrap for second, with Neil Hunt (Mondiale) just 0.001s ahead of Paul Tucker (Swift) when it mattered. The Saturday race was a victim of the heavy rain, as was the planned Snetterton Saloons contest. Both 911 Challenge races were held and Robert Hollyman's Porsche 964 won each at a canter.

PETER SCHERER

NEARYS LAND TITLE AS GT CUP GOES FROM STRENGTH TO STRENGTH



The growing success of the GT Cup has been one of the highlights of the season. The seven-round campaign has attracted healthy grids, with nearly 30 entries for all meetings and closer to 40 at Silverstone and Brands Hatch.

Chris Haynes now manages the championship, originally set up by his brother Marc back in 2007 as a series. "It's been just amazing and those grids at Silverstone and Brands, we have just tried to build on last year's success, which itself was fantastic," said Haynes.

"Our core value is centred on the drivers. It's an experience that has to be enjoyable for them, regardless of their actual racing experience."

Richard Neary's Mercedes-AMG GT3 and John Dhillon (Lamborghini Huracan GT3) made an early break in the first sprint race at the Snetterton finale on a damp track. But Neary had a spin on lap five of 10, handing Dhillon the lead from the closing Radical RXC of Steve Burgess.

The McLaren 750S of Morgan Tillbrook began to close on Burgess too, and a terrific duel ensued. This became the lead battle after Dhillon lost it under braking at Agostini a lap from home. Despite going side by side over the final tour, Burgess held on to win from Tillbrook, with the recovering Dhillon third from Matt

Manderson's Aston Martin GT3 and Neary.

The first of the two endurance races produced an unlikely winner due to continuous rain. Dhillon started his clutchless Lamborghini from the pitlane, and his first-lap spin and stall brought out the safety car, with Neary leading Tillbrook, Shamus Jennings (Porsche 991 GTR GT3) and Burgess. Racing resumed on lap five, but it didn't last long: the conditions brought the safety car back out two laps later, with the majority of the field pitting.

But the safety-car intervention turned into a red flag, and Charlotte Gilbert's Marcos Mantis – which had not yet pitted – was the unlikely winner on countback. Paul Bailey/Ross Wylie (McLaren MP4-12C Can Am) were second from Richard Chamberlain's Porsche 935 and the Manderson/Mike Brown Aston Martin, with only half-points awarded.

A three-car collision on the opening lap of the second sprint race brought the safety car out again. From the green flag, Sam Neary – in for father Richard – was in charge, taking a dominant win over Burgess, with Tillbrook snatching third from Dhillon on the last lap.

Neary Sr started the Mercedes in the final race of the season and had the lead for the first four laps, until Tillbrook surged ahead through Turn 3. A lap later Neary's pace seemed to reduce, and Burgess was second into Agostini.

Burgess was the last of the trio to stop, and Marcus Clutton – in for Tillbrook – soon went clear, with second enough for the Nearys to secure the overall GT Cup title. Gradually Dhillon closed in on Burgess and took third with three laps remaining, with Sennan Fielding/Grahame Tilley (Nissan GT3) and Laurent de Meeus/Jamie Stanley (Ferrari 488 GT3) next.

PETER SCHERER

Gilbert took surprise win in Marcos Mantis



Luckless Khera misses out as Swift seals title

**OULTON PARK
MSVR
1-2 OCTOBER**

Luckless Lucky Khera lost his Ferrari Challenge UK Trofeo Pirelli crown at Oulton Park when former Radical racer James Swift overcame a seemingly unbeatable points deficit to claim his first championship success.

Khera arrived in Cheshire with a 19-point advantage over Swift and, with just seven cars making up the class, two mid-points finishes would have been enough for him to retain his title. But, sometimes, stars simply fail to align.

Swift, who had missed the opening rounds, commenced his assault in blistering fashion, immediately delivering an unbeatable pole position time (and taking the point that came with it). When he led from the start, it looked as if it would be a straightforward romp home for the Dick Lovetts man, especially when Khera found himself in the wrong gear as he headed towards Old Hall and then, while hunting down Henry Simmons in a bid to catch the leaders, went for a gap as Simmons went wide – the resulting contact put both out



New champion Swift (right) attempts a move on Sikkens as Khera watches on

of the race, but not before Khera left a trail of fluid in his wake.

Minutes later, the high kerbs took their toll on Paul Simmerson, who proceeded to dump oil on top of Khera's fluid. With his traction lost, Swift slowed, allowing Paul Hogarth and Coppa Shell champion Graham de Zille to close. Approaching Lodge for the final time, Hogarth sensed an opportunity and lunged down the inside, punting Swift sideways as he turned in and sending both towards the gravel. That left de Zille (who had been watching and waiting) to nip past and take the win.

Han Sikkens headed Swift for race-two

pole in the wet, with Khera lined up behind. Whoever of Swift and Khera finished ahead would win the title: it was as simple as that. Sikkens started well, leaving Swift and Khera to slot in behind.

The pace was fast, the racing close, but only once was the lead threatened. Nevertheless, Swift appeared comfortable in second, though Khera looked intent. Suddenly, he was right on Swift's tail and ready to launch an attack, only for the safety car to be deployed after Faisal Al-Faisal speared into the barrier. With the recovery eating into the minutes, there was time only for a one-lap shootout at the restart.

Roche and Greenan entertain in Formula BOSS

**MONDELLO PARK
MPSC
2-3 OCTOBER**

Michael Roche drove his Dallara F306 superbly to hold off the more modern Formula 3 car of Tony Greenan in the opening Formula BOSS race at Mondello Park, the pair wheel to wheel on a number of occasions in an entertaining contest.

After eclipsing the outright circuit lap record in qualifying by over a second,



McDonnell sealed Fiesta ST crown with win in first race

polesitter Sylvie Mullins dropped to the back with the sole aim of beating the mark in the race, which he missed, but only by a fraction as he finished fifth. Race two was held in treacherous conditions, and former class champion Fergus Faherty was untouchable. His Dallara F3 car crossed the line well ahead of the Gould GR37 of Mullins, who took the title, with Roland Doherty impressing in third.

Graham McDonnell took the Fiesta ST opener, sealing the title, while Kevin Doran led all the way in the second race. Darragh Denning got close enough to have a go on the final lap, but Jack Byrne instead lunged to steal runner-up spot with an opportunistic move at the final corner. After receiving damage in the first race, Michael Cullen started race two at the back, and made up 10 places on the opening tour before crossing the line fourth!

An uncharacteristic spin from Jackie Cochrane relegated his Tiger to second in the HRCA opener, with son-in-law Gareth

Thompson (MGB) taking a strong win in tricky conditions, while Johnny Flynn was third. Cochrane stalled on the grid in race two and was towed in, leaving Thompson to do the double, with Flynn's MG Midget coming out on top in an entertaining battle with Conor Cooke for second.

Despite starting from the back, Richie Kearney took the first Formula Sheane race with ease. Even with a reversed grid, he sealed the double, raising funds for Motor Neurone Disease research in the process.

Peter Barrable took the first Legends race, thanks to a race-long bumpdraft from brother Rob, who also went into defensive mode when Geoff Richardson caught the pair in the closing stages. Jamie Moylan took race two after last-corner contact with Richardson, while Rob Barrable was victorious in race three. Richardson's points tally was enough to assure himself of the crown, making it a second success on the trot in the highly competitive class.

Elsewhere, Michael Cullen completed

Little twice defeated Marris in closely fought Ferrari Formula Classic races



HINDLE

Sikkens immediately pulled clear, while Swift appeared to gap Khera, who, desperate to keep in touch, got just a little out of shape at Old Hall, then carried the mistake down towards Cascades, where he lost the rear and spun out of contention. Hogarth claimed his second podium of the weekend, while de Zille took Coppa Shell honours.

Despite a depleted grid, the three Pirelli Formula Classic races produced fantastic duels between the F355s of James Little and Wayne Marris. Marris kept the upper hand in the dry, but Saturday's rain meant the positions

were swapped, with Little holding off Marris in a straight fight in race two.

Then, in the third encounter, the lighter car of James Cartwright shot into the lead off the line, followed closely by the similar 328GTB of Chris Butler, only for Butler to spin out at the first corner, scattering all behind. Though increasingly pressured, Cartwright suggested he might just hold out against the quicker cars but, ultimately, they forced their way through – Little ahead of Marris – and ended three 20-minute races separated by a combined total of just 2.1 seconds.

STEVE HINDLE

Roche just about kept Greenan at bay in opener



CHESTER

his unbeaten Irish Stryker record with two strong wins, even a reversed grid in race two failing to stop him. A pair of Irish Touring Car wins ensured Ulick Burke of the title in his supercharged Honda Integra. Alan Watkins and Paul Parr shared the concurrent Supercar wins, race-two victor Philip Jones having being excluded for contact with Watkins, while Shane Murphy and Neil Tohill took the SEAT Supercup spoils.

Alan Dawson held off fellow Mondello specialist Michael Barrable in the opening

Fiesta Zetec race, with Barrable also clinching the title. Harry McGovern led home the impressive Aimee Woods in race two. Newly crowned champion Barrable, however, was in the wars, but still climbed to third with fastest lap in a race that had the crowd on their toes.

Gary Duggan and Daniel McDonnell took a Future Classics win apiece in their Fiat Punto Abarths, the second race involving a great scrap with both of them and Tomas O'Rourke's Civic.

LEO NULTY

WEEKEND WINNERS



HINDLE

OULTON PARK

FERRARI CHALLENGE UK

Race 1 Graham de Zille (above)

Race 2 Han Sikkens

PIRELLI FERRARI FORMULA CLASSIC

Race 1 Wayne Marris (F355 Challenge)

Races 2 & 3 James Little (F355 Challenge)

For full results visit: tsl-timing.com

MONDELLO PARK

FORMULA BOSS IRELAND

Race 1 Michael Roche (Dallara F306)

Race 2 Fergus Faherty (Dallara F3)

FIESTA STs

Race 1 Graham McDonnell

Race 2 Kevin Doran

HRCA

Races 1 & 2 Gareth Thompson (MGB GT V8)

FORMULA SHEANE

Races 1 & 2 Richard Kearney (below)

IRISH LEGENDS

Race 1 Peter Barrable

Race 2 Jamie Moylan

Race 3 Robert Barrable

IRISH STRYKERS

Races 1 & 2 Michael Cullen

IRISH TOURING CARS, SUPERCARS & SEAT SUPERCUP IRELAND

Race 1 Shane Murphy (SEAT Leon)

Race 2 Paul Parr (Supercar)

FIESTA ZETECs

Race 1 Alan Dawson

Race 2 Harry McGovern

FUTURE CLASSICS

Race 1 Gary Duggan (Fiat Punto Abarth)

Race 2 Daniel McDonnell (Fiat Punto Abarth)



CHESTER

For full results visit: timing.ie

AT THE TOP OF THE HILL

The 2021 British Hillclimb season was a remarkable one for Wallace Menzies as he never finished off the podium and set multiple records en route to a second crown, after years of hard work

PAUL LAWRENCE

PHOTOGRAPHY BEN & PAUL LAWRENCE



With a truly impressive campaign that had speed and consistency from start to finish, Wallace Menzies retained his British Hillclimb Championship crown this year. During what is widely regarded to have been one of the most competitive seasons in the championship's long history, the Scot was stunning in his Gould GR59 and settled the title race with three rounds to run.

Menzies, 47, is from Kincardine and works in the family business of Tillicoultry Quarries. His wife Nicola, who he met through the sport, is an accomplished hillclimber in her own right and in August set a new ladies' record at Shelsley Walsh in 24.70s in the Gould GR55 she shares with Dave Uren. Wallace and Nicola have two sons Craig and Ian, 11 and 14, and both are showing interest in the sport.

Wallace started competing in Scottish sprints in 2009 in a Subaru. Old mate Stuart Dow had a Westfield and Wallace duly had one of his own with a Ford crossflow engine.

"After spending a bit of money on the engine to find another 4bhp, I realised it was probably a lot more sensible to build a

bike-engined Westfield," recalls Menzies. "Ross Cochran and I ran in the road-going class and we won the Scottish championship twice. That sparked a desire to go quicker and I went to Del Quigley at DJ and bought a bike-engined Firehawk. We ran that as a 1600 and then we supercharged it. We had all the problems that people are still having with supercharged bike engines today!"

With Quigley and Andy Smith, he then decided to build a big-engined car, which became the DJ Firestorm. "In 2014, I crashed the car at Doune, which was bigger than my Shelsley crash [when he escaped a 120mph somersault at the Worcestershire venue with just minor injuries], and damaged the tub," says Menzies.

"The tub was absolutely perfect both times and it did everything it should and more. It is great to see that Alex Summers has kept developing the Firestorm and working with Del and Andy to get it where it is today. It's fantastic and they've brought it on a lot from where I left off with it."

However, the Doune accident was a catalyst for a fresh direction. "I spoke to David and Sean Gould – David said they couldn't have a car ready for a couple of years but could do a GR59 with a big engine," continues Menzies. "He said to go and buy something for now and the Martin Groves GR55 was up for sale. It had a scary pedigree in all honesty because you're always going to get instantly compared to [four-time British champion] Martin, an outstanding driver. It's not a welcome comparison!"

He shared the GR55 with Tom New in 2015 and New has run the car ever since. The 2015 and 2016 campaigns were good in the GR55 and for 2017 the new car was ready. Menzies had been contesting the British Hillclimb Championship since 2010 and now spent two seasons getting used to the GR59.

"We really struggled at the European Masters event in Italy in 2018, so we had a step change in what we were doing," he explains. "We worked really hard after that with Russ Walton on the suspension and put a really different set-up on the car. We changed the geometry, went testing and went in our own direction and worked really hard on the suspension to find ways we could improve it. The aero package is absolutely fantastic: it's really, really stable."

"Our testing is done away from events, which maybe sounds odd but when it's such a massively busy calendar, you don't get enough time to be testing and score decent points. You've almost got to do it at the start of the season because, once we're into the season, it's so busy with travelling and work and family life. >>

"WE CHANGED THE GEOMETRY AND WENT IN OUR OWN DIRECTION AND WORKED ON THE SUSPENSION"



The Gould GR59 driver has been the class of the British Hillclimb field this year



Menzies did not finish off the podium in 2021



Menzies is running out of room for all his success stickers



Barnes (l), Walton (second left) and New (far right) are vital parts of Menzies' team, plus support from younger son Craig

"In 2019 we did as many events as we could get for the start of the season. We were travelling all around the country just to get time in the car because of all the changes we'd made."

That work paid dividends as Menzies won the British Hillclimb title in 2019 but then had to sit out 2020 as COVID-19 cancelled the championship for the first time in its seven-decade history. It was a long wait until the start of the 2021 season and Menzies didn't even sit in his Gould for 18 months.

Nevertheless, he then proceeded to deliver a faultless campaign and seldom, if ever, put a wheel wrong as he took 17 wins and 10 other podiums in 27 rounds to become a worthy champion. But one of the best quality fields for many years ensured that Menzies had to work for every point.

Before the season, at least half a dozen drivers rightly had title hopes in a wide variety of cars. Multiple champions Scott Moran and Trevor Willis lined up, with 2015 championship winner Summers and Sean Gould also key contenders that Menzies would have to beat to retain his crown.

The season should have opened at Prescott in April but, with Menzies unable to attend due to Scotland's travel restrictions, the first rounds were delayed. The Prescott date was rescheduled for July when the customary trip to the Channel Islands was another COVID casualty.

When the season did start at Loton Park in May, Menzies put a big marker down and that stunning form continued week in, week out as he built his campaign. He drove beautifully in a season that reset five major hill records, such was the

"I GET THE CREDIT FOR THEIR WORK BECAUSE THEY'RE GETTING SOAKED TO THE SKIN AT HAREWOOD"

pace at the head of the championship run-offs.

Most notable of the records to fall was the 13-year-old mark at Shelsley Walsh where Menzies was one of three drivers to better the 22.58s set by Martin Groves in 2008. Ultimately, it was Gould who left the record at 22.37s on a day that many people consider one of the finest in the discipline's history.

However, over the 27-round, 12-event season it was Menzies' unbeatable balance of speed and consistency that took him to the crown. He was quick everywhere, from the power hills of Shelsley and Gurston Down to the more technical challenge of Prescott and the fast but bumpy Barbon Manor.

"This season has been really good but it's down to the hard work of Tommy [New], Russ [Walton] and Dunc Barnes," says Menzies – talk of his core team of three people is never far away. "I get the credit for their work because they're getting soaked through to the skin at Harewood and they're giving up their weekends."

Clearly, the pace at the top of the championship has stepped up a gear this season and Menzies is quick to point out that it's not



After the series was suspended in 2020 due to COVID-19, British Hillclimbing was back in style this year



just him: “It’s certainly not me on my own and people are doing personal bests in practice again because everybody’s pushing so hard. I think I’ve probably got a car underneath me that might not work for somebody else.

“Every time the car comes out, it’s immaculate and on the button. We have the spares we need but more importantly, we’ve got the ability in the team. I’m not really allowed to touch the car in case I break it. I don’t have to think about the car at the weekend so that gives me time to concentrate on the data and see where I can go quicker. We’re all really good mates and it’s really good fun.”

New, founder of New Techniques near Southampton, and Walton and Barnes have been key to winning the title. Clearly, a great deal of time, effort and preparation goes into the success. “It’s a passion, which makes it a lot easier,” says New. “Generally, most of the hard work is done during the week. So, providing we don’t have an unforeseen problem, the weekends normally run quite smoothly. We occasionally might have a little bit of a test between meetings but generally it’s a case of leave it alone. We’ll just keep moving on for 2022. We’ve got to keep developing the car. It won’t be a lot different, but there’ll be a few tweaks.”

Menzies is also keen to give credit to his rivals. “Alex and I have left I don’t know how many weekends on the same points,” he says. “No matter what you do, he’s just there all the time. Alex is well down on power and he’s probably got 100bhp less than me. He’s very, very good and smooth and his consistency is phenomenal.

“Sean’s got moments of absolute brilliance when he’s driving,” Menzies adds. “I was really pleased he got the Shelsley record because it was one that he really wanted. Then Scott Moran, Trevor Willis, Dave Uren and others are incredibly quick.”

Through it all, Menzies’ Gould was superbly presented and 100% reliable. In fact, the car’s reliability was matched by its driver and it was that lack of errors that put Menzies on another level. Others were just as quick on the day, notably Summers in his Cosworth Indycar-powered DJ Firestorm, and Gould in his GR59. Both won run-offs and both set records, but neither could ultimately live with the razor-like precision and consistency of Menzies.

Typically for the top end of British hillclimbing, the paddock atmosphere was as sporting and friendly as it was competitive and whoever won the run-offs would be quickly congratulated by their rivals. It’s a refreshing attitude that makes hillclimbing so special, and 2021 was a truly magical year.

Menzies reckons it will be a case of more of the same in 2022. “We will be doing work over the winter but there will not be any massive changes,” he adds. “It would be a bit silly to go and change from where the car is at. I think it’s probably more about seat time next year. I think you’re guaranteed to get another good year because I know that the guys will be working really hard over the close season to beat me next year!” ❧

WHAT HIS RIVALS SAY

This is what Wallace Menzies’ chief rivals made of his successful 2021 British Hillclimb campaign...

ALEX SUMMERS (DJ FIRESTORM)

Runner-up in 2021; champion in 2015

“Wallace was always a great driver but he was always chasing the car. Then, several years ago, he went to the Gould GR55 with Tom New and, by the end of that year, he was on it. He’s very data driven and everything on the car is optimised. He’s thinking about every aspect of the car. He’s a very good driver with the best package and he drives it beautifully with no mistakes. He’s very late on the brakes and is measured and calm. It’s a whole team effort. If you want to build a hillclimb team, you’ve just got to look at what they do.”



SEAN GOULD (GOULD GR59)

Third in 2021 championship; constructor

“I don’t see him as a rival because he’s a customer. On the hills, you compete against yourself. Out of all of us, he’s done the best job. The car is only as good as the driver in it. The driver, the car and the team make a fantastic package. He’s shown the pace of the car and there is more to come.”



SCOTT MORAN (GOULD GR59)

Fourth in the 2021 championship; six-time champion

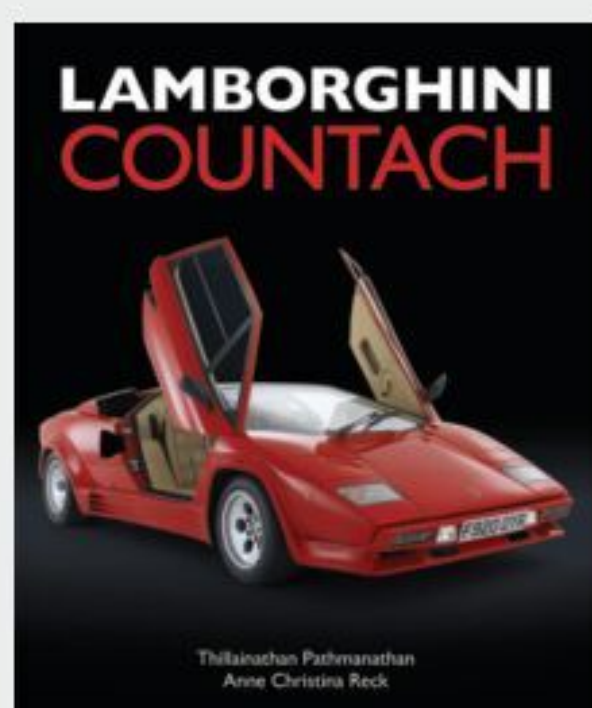
“He’s had a cracking good year with a really good team. You don’t get a lot of seat time and you’ve got to have the car right straight out of the box. That’s what Wallace, Tom and the team have done.”



Countach has no race pedigree, but was employed as pace car for the 1981 Monaco Grand Prix



A SUPERCAR FOR THE AGES



BOOK
LAMBORGHINI COUNTACH
RRP £60

Fifty years since it first turned heads at the Geneva Motor Show, the Lamborghini Countach has gained legendary supercar status, and is the subject

of this book released earlier this year.

For both authors – husband and wife Thillainathan Pathmanathan and Anne Christina Reck, who are consultant eye surgeons in their day jobs – there’s no denying that this project has been a labour of love, and their passion for the subject matter is clear throughout the 336 pages. It’s an incredibly well-researched tome that arguably leaves no stone unturned in discovering everything there is to know about not only the Countach, but the story behind Lamborghini itself.

From founder Ferruccio Lamborghini’s upbringing, to how he was captured as a prisoner of war in 1944 before founding the company via the production of tractors, it’s an interesting back story.

The stark difference between how Lamborghini ran his operation compared to another famous Italian based out of Maranello could hardly have been more pronounced, including Lamborghini’s decision not to create racing machines but instead his desire “to build Gran Turismo cars”.

The book charts the creation and eventual release of the Countach, covering details including the

possible origin of its unusual name and the inspiration for its eye-catching design.

The majority of the chapters are taken up with the various models of the Countach and how they differed and were improved upon, with nearly 2000 cars produced between 1973 and 1990.

The latter part of the book delves into the other cars produced by the Italian manufacturer – and those from rivals such as the Porsche 911 Turbo and Aston Martin Vantage V8 – an insight from Tonio Lamborghini, son of Ferruccio, as well as a first-hand account of what life is like as a Countach owner.

Throughout there are also mini-sections on those behind the scenes and their involvement with both Lamborghini and the Countach, including renowned test driver Bob Wallace and designers Gian Paolo Dallara and Horacio Pagani, both of whom worked for the Italian manufacturer before founding their own world-renowned businesses.

There is a wealth of pictures from across the decades of the various models, with many additional shots from the authors’ personal collection. There are also diagrams and drawings of the car, broken down into its basic elements – from each bodywork panel to the engine and even the crankshaft.

The authors make no apology or hide their love for the Countach, describing that it “brooks no rivals” and that “as a complete package it was unrivalled”. No doubt fans of Ferrari, Porsche or any number of other manufacturers will disagree. But this isn’t to say that the book isn’t critical of the Countach.

WHAT'S ON

INTERNATIONAL MOTORSPORT

Turkish Grand Prix

F1 World Championship
Round 16/22

Istanbul Park, Turkey

10 October

TV Live Sky Sports F1,
Sun 1255

TV Highlights

Channel 4, Sun 1830,
Sky Sports F1, Sun 1930

DTM

Round 8/8

Norisring, Germany

9-10 October

TV Live BT Sport ESPN,
Sat 1215, Sun 1215

DTM Trophy

Round 7/7

Norisring, Germany

9-10 October

TV Live BT Sport Extra2,
Sat 1400, BT Sport ESPN,
Sun 1400

World Touring Car Cup

Round 5/8

Most, Czech Republic

10 October

TV Live on
motorsport.tv, Sun 1300,
Sun 1400, Eurosport 2,
Sun 1400, Sun 1700

GT World Challenge Europe Endurance Cup

Round 5/5

Barcelona, Spain

10 October

TV Live on
motorsport.tv, Sun 0800,
Sun 1330, Sun 1400

GT4 European Series

Round 6/6

Barcelona, Spain

9-10 October

TCR Europe

Round 7/7

Barcelona, Spain

9-10 October

TV Live on
motorsport.tv, Sat 1400,
Sun 1220

Formula Regional European by Alpine

Round 9/10

Mugello, Italy

9-10 October

TV Live on
motorsport.tv, Sat 1350,
Sun 1335

IMSA Sportscar

Round 11/12

Virginia International
Raceway, USA

9 October

NASCAR Cup Series

Round 32/36

Charlotte, USA

10 October

TV Live Premier
Sports 2, Sun 1830

World Rallycross

Round 6/9

Spa, Belgium

10 October

TV Live BT Sport ESPN,
Sun 1600

UK MOTORSPORT

Donington Park BARC

9-10 October

British F4, BTCC,

Ginetta GT4 Supercup,
Ginetta Junior, Mini
Challenge, Porsche
Carrera Cup

TV Live ITV4, Sun 1125

Oulton Park 750MC

9 October

Alfa Romeos, Club
Enduro, Formula Vee,
MR2s, Sports 1000

Pembrey BARC

9-10 October

British Trucks,
Junior Saloons,
Legends, MaX5
Racing, MG Owners
Club, Pickups, Welsh
Sports & Saloons

Snetterton BRSCC

9-10 October

Caterhams (Academy,
270R, 310R, Roadsport),
Clubsport Trophy,
Mazda Mk4 Trophy,
Modified Ford Series,
National FF1600

Mallory Park 750MC

10 October

750 Formula,
Armed Forces
Challenge, Historic
750 Formula, Locost

Knockhill SMRC

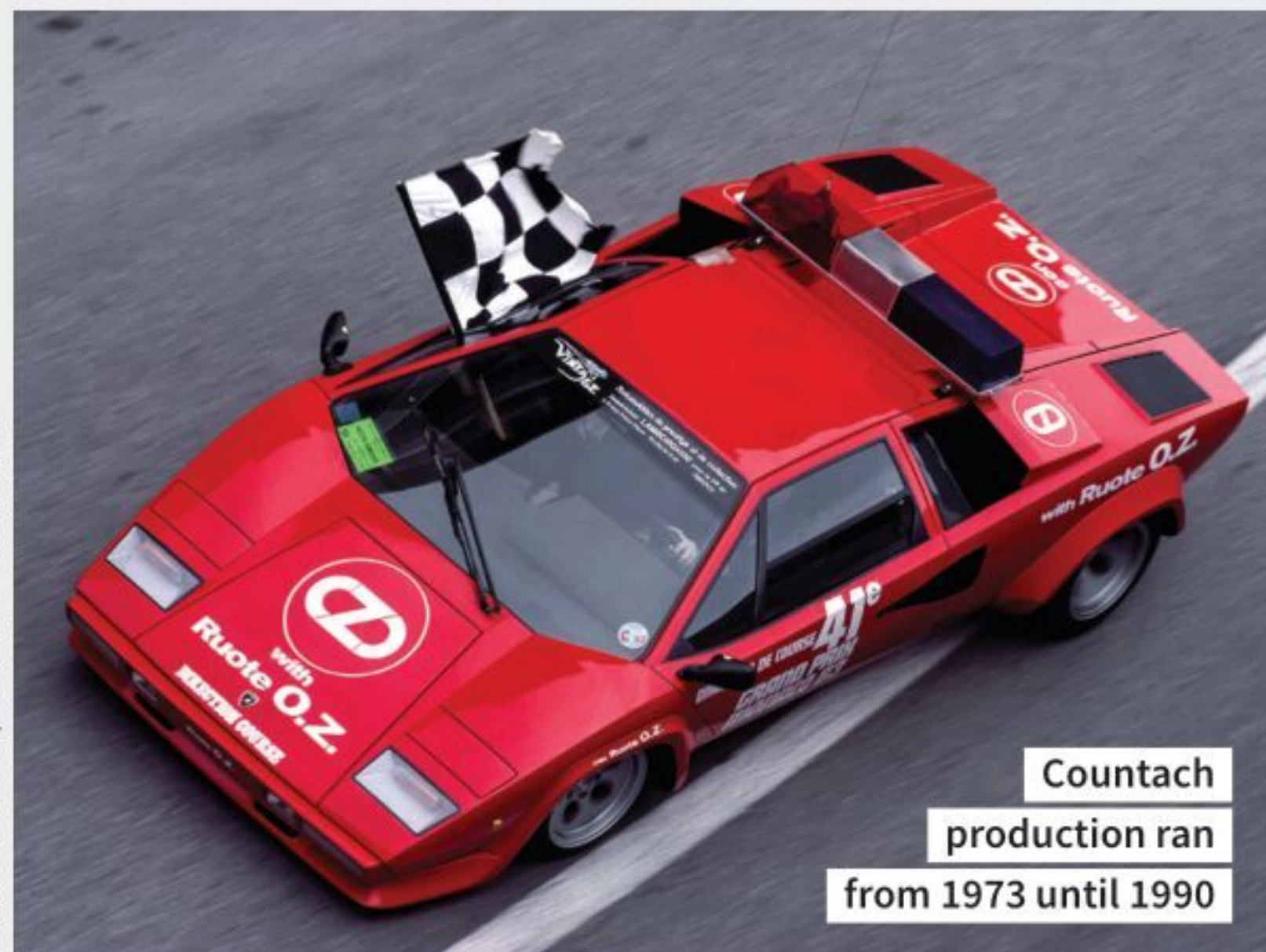
10 October

C1s, Classics,
Fiesta STs, Minis,
Scottish FF1600

Mull Rally

8-9 October

British Rally
Championship
Isle of Mull, Scotland



Countach
production ran
from 1973 until 1990

The car was reported to have overheating problems initially and that it was lacking in the aerodynamic department, as well as having poor visibility.

They even go as far to title a sub-section as 'You really don't need a supercar – not even a Countach'.

Although well researched, the book does have a tendency to divert onto a tangent. The origins of the guillotine (when discussing the revolutionary hydraulic guillotine doors featured on the Countach), the gases that make up the Earth's atmosphere and a deeper look at the laws of physics (when delving into the aerodynamics of the car) are just a few examples. There's no denying that this again has been well researched, but at times it feels a little unnecessary for a book about a supercar.

Even by motoring book standards this is a niche product. That being said, any reader with an appetite to learn more about one of the world's greatest supercar manufacturers will find there's plenty to digest, while for any fan of Lamborghini and the Countach it's a must-buy.

STEFAN MACKLEY



HONE
motorsport
IMAGES



FROM THE ARCHIVE

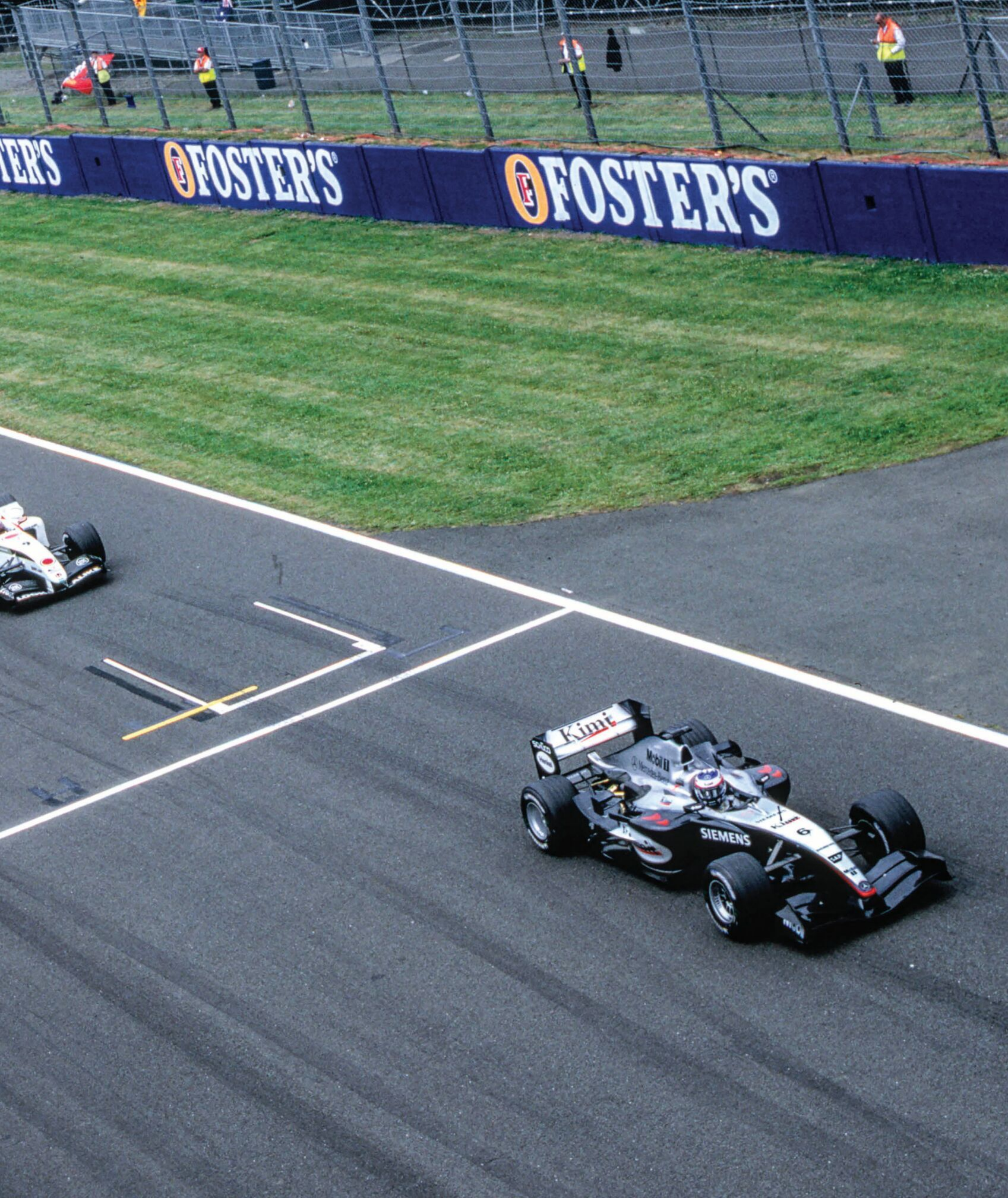
Kimi Raikkonen (McLaren-Mercedes MP4/19) leads the field away at the start of the 2004 British Grand Prix at Silverstone. It was the Finn's sole pole position of the year, from which

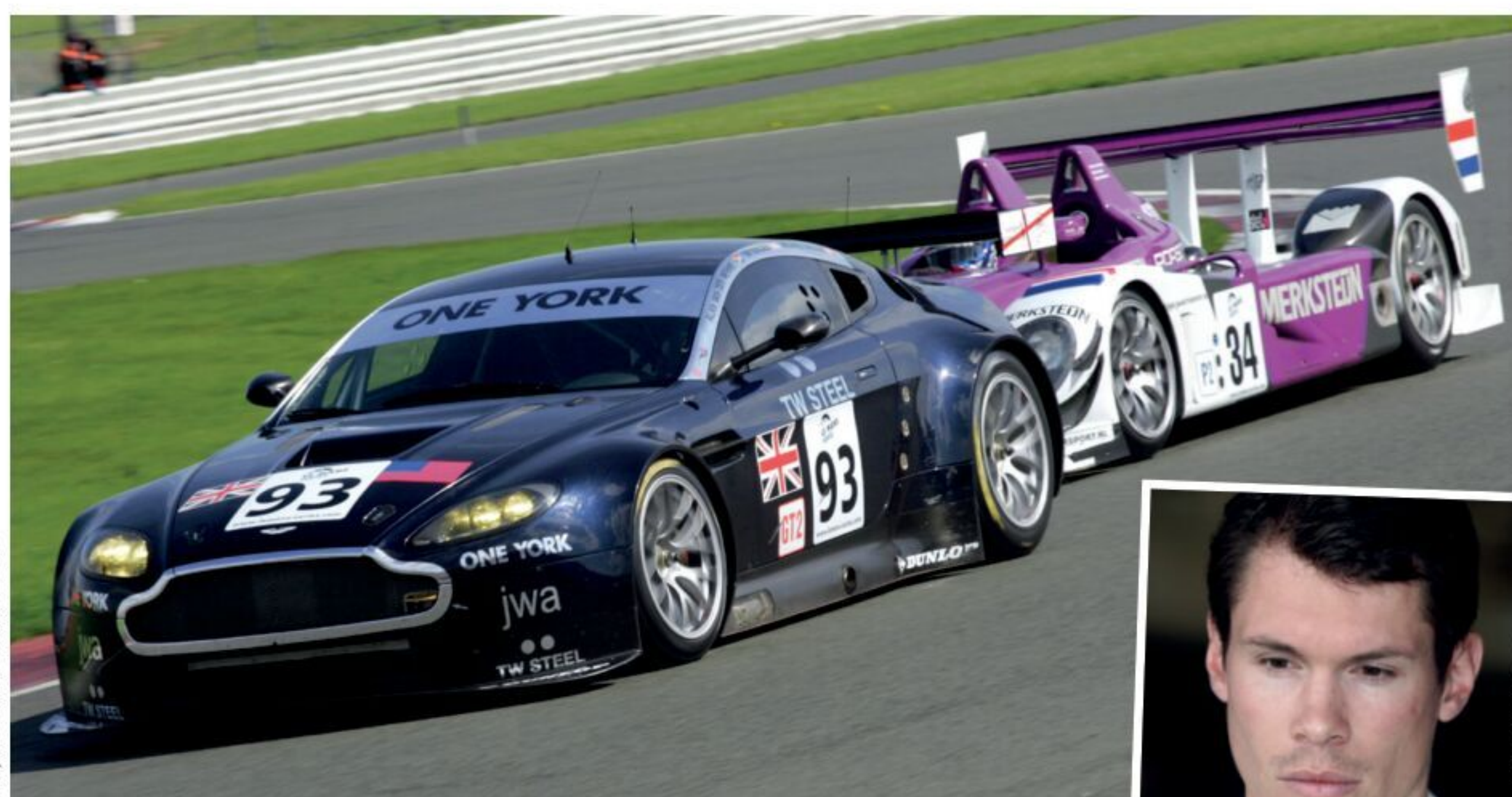
he stormed to an early advantage of more than four seconds in the opening laps. But when the top three (behind Raikkonen were the Ferrari F2004 of Rubens Barrichello and the BAR-Honda 006 of Jenson Button)

made their first pitstops, Ferrari's Michael Schumacher took charge, turned up the wick and romped off to take his 10th victory of the season. Raikkonen did get one win that year, three rounds later in Belgium.

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HAVE-A-GO HERO

When drivers crop up in unexpected places

ALAN VAN DER MERWE

His job driving Aston Martin and Mercedes machinery on grand prix weekends makes him the envy of many. But while Alan van der Merwe's role as Formula 1's medical car driver means he's not actively racing anymore, the 41-year-old does have experience of racing an Aston from a brief spell in sportscars.

The South African, crowned British Formula 3 champion in 2003, joined James Watt Automotive – the first customer squad to run the Aston Martin Vantage GT2 – for the 2008 Le Mans Series. The former BAR F1 tester describes it as “a very odd stage in my career where I didn't quite know where it was going”.

Van der Merwe admits he felt “very much out of my comfort zone” in the Aston, and its lack of performance didn't help matters. A planned debut at Barcelona was aborted – “something to do with a timing belt or oil feed; we could have gone racing but were probably going to blow something up” – while his experience of racing at Silverstone was forgettable. Together with Tim Sugden and Michael Outzen, they finished 13 laps down on the GT2 class winner.

“We were miles off the pace, all we did

was drive around slowly,” he recalls. “We were never really going to be setting the world on fire. You could tell the car had potential, but it wasn't really competitive yet. It was just bad timing.”

Rebranded as the Vantage GTE for 2012, the car would enjoy great success with the Prodrive-run factory team, winning the Pro class at the Le Mans 24 Hours in 2017 and the Am class in 2014.

But van der Merwe's involvement in the project wasn't to last. He admits that he “didn't really enjoy” his sportscar stint, says he “didn't end up getting paid the way I was supposed to”, and feels his “chaotic” introduction put him off.

“There weren't really major discussions [about continuing],” he says. “It just fizzled out in the end. Maybe I could have gone on to have a decent career in that, but I don't really regret it.”

Recognising that “my momentum had started to drop”, he was close to getting “a regular office job” when a call out of the blue asking him to meet then-F1 race director Charlie Whiting between flights at Heathrow led to the job he's held since 2009.

JAMES NEWBOLD

IN NEXT WEEK'S ISSUE

Turkish GP action

WILL IT BE CHAOS AGAIN AT ISTANBUL PARK?



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AUTOSPORT

ENGINEERING

PLUS

The radical
changes coming
to NASCAR

FAREWELL M6

The story of BMW's unpopular GT3 winner

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Venerable BMW M6 is still winning NLS races on the Nordschleife after six years' service

THE UNPOPULAR GT3 STALWART BUILT FOR THE BIG OCCASION

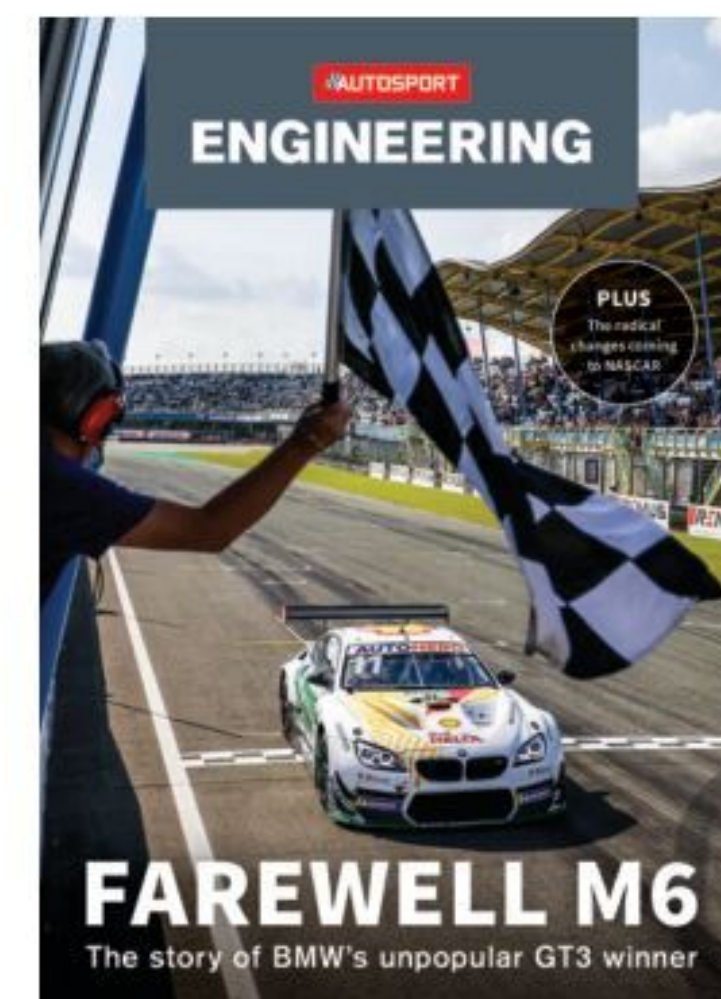
It's clearly a long shot after two non-scores last weekend at Hockenheim left Marco Wittmann 41 points off the summit and needing his DTM title rivals to suffer drastic misfortune at the Norisring finale this weekend. But should the Walkenhorst Motorsport driver pull off a Houdini act worthy of West Brom's 2004-05 team to win the title, it wouldn't just be a fitting farewell for the BMW M6 GT3 as it prepares to bow out at season's end after six years of service. It would arguably be the car's finest achievement, even after winning three 24-hour races and finishing 1-2 at Spa in 2018.

Some will no doubt argue that Balance of Performance would negate the merit of such an achievement were it to happen – and that the M6 has been kept in contention when perhaps it shouldn't

have been. But whereas the Rowe BMW outfit hasn't graced the podium once, Walkenhorst appears to have unlocked something special – not easy to do with a car renowned for not being the easiest to work with and for which set-up options have surely been totally exhausted by now.

When it is replaced by the M4 GT3, BMW may become a more consistently strong force. But on its day, the M6 can and has beaten all-comers, so will set a high benchmark for its successor.

There's change on the horizon seemingly wherever you look in 2022, as hybrid kits come to the British Touring Car Championship (page 18) and NASCAR gets an all-new Next Gen car (page 22). Marcus Simmons and Jim Utter have the inside track on what to expect as these two very different series gear up for significant seasons ahead.



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WHAT WE KNOW SO FAR ABOUT WRC 2022

Hybrid power usage outlined, carbon zero status plans revealed

The World Rally Championship has revealed further details of its move to a hybrid future through new Rally1 regulations for 2022.

The championship's new ruleset will feature cars from Toyota, M-Sport/Ford and Hyundai fitted with Compact Dynamics-designed 100kW plug-in hybrid units, producing 514bhp when combined with 1.6-litre internal combustion engines. To improve driver and co-driver safety, chassis have been redesigned to cope better with various types of impacts.

Hybrid power is set to be used in every stage, with full electric mode – which has a 20km range – deployed during road sections and at the service

park. Teams will also use special engine software preprogrammed into the car's ECU before stages to allow hybrid use in certain sections of the test. These will be tailored to the driver's style and the road conditions.

The amount of power released with each press of the throttle will be decided by the length of the stage and the battery's state of charge.

Electrical power can be recovered when the throttle is released and through regeneration from braking. Batteries can be charged to full power in approximately 30 minutes.

"It will not be a push-to-pass system," said FIA technical director Xavier Mestelan Pinon.

"From the start of each stage you will be able to activate it for 10 seconds so you will have maximum power, but after that to have more power the driver will need to regenerate enough power on the way."

According to the FIA, the hybrid system can withstand a 70g impact and will feature a safe mode should it fail, allowing crews limited power thereafter.

WRC cars will also be powered by 100% sustainable fuel next season, provided by P1 Racing Fuels as part of the championship's move towards a carbon-neutral future by 2030.

TOM HOWARD



HYUNDAI

BTCC TO INCORPORATE ON-BOARD COCKPIT SIGNALLING, RENEWABLE FUEL FROM 2022

The British Touring Car Championship will incorporate an onboard visual signalling system in all cars as standard next year.

Created by the series' timing and scoring partner TSL, the system will allow race control to directly relay important safety messages to drivers via an in-car dashboard, mirroring systems used in several global series. BTCC boss Alan Gow said that the system was intended "to supplement, not replace, the traditional flag system deployed by the marshals".

It is expected that all cars

JEP/MOTORSPORT IMAGES



Drivers may have a better chance of avoiding scrapes

on the BTCC support bill will follow suit, including the Porsche Carrera Cup GB, Mini Challenge, British F4 and Ginetta's suite of sportscar championships.

"This is a very significant safety enhancement for our BTCC drivers and indeed our trackside marshals," said Gow. The BTCC will adopt hybrid

power from 2022 (see page 18) courtesy of Cosworth Electronics and switch to fuel incorporating 20% renewable components. Produced by Haltermann Carless, the new fuel is expected to yield an 18% reduction in emissions. A five-year contract has been agreed that will extend the firm's 26-year run of supplying TOCA with unbranded control fuel.

Gow said: "It is only right that the BTCC continues to navigate a more sustainable pathway, and we are pleased to be introducing a cleaner fuel from the 2022 season onwards."



INDY AUTONOMOUS CHALLENGE ENTRANTS PURSUE \$1M PRIZE

Fully autonomous vehicles will do battle at the Indianapolis Motor Speedway later this month for a \$1million prize in the Indy Autonomous Challenge.

On 21-23 October, 10 teams from 21 universities around the world will enter identical AI-controlled Dallara AV-21 chassis in the IAC, organised by Indianapolis-based Energy Systems Network, at the home of the Indianapolis 500.

The cars have been assembled and maintained by IndyCar team Juncos-Holinger, which ensures mechanical and set-up parity between the teams to make software development the differentiating

factor in the competition. The runner-up team will receive \$250,000 and third place \$50,000.

The build-up to the IAC has been over a year in the making. Teams had to lodge their interest last February and demonstrate an ability to automate a passenger vehicle by May 2020. Italian team PoliMOVE collected the \$100,000 prize for winning the 'simulation race' at IMS in June.

The grid for the 20-lap final will be set by a qualifying race, where teams are required to complete 10 solo laps, with at least one of those in under 75 seconds.

IN BRIEF



LOTUS REVEALS NEW GT4

Lotus will return to GT racing with the new Emira GT4 next year. Developed in partnership with RML, the 3.5-litre Toyota V6-powered car is the first bespoke racer produced by the Norfolk manufacturer since the Evora GT4. It will be officially launched later this year.

HERBERT MEETS SCHOLARS

Formula 1 race winner Johnny Herbert handed scholarships to three students at Bolton University's National Centre for Motorsport Engineering last month. Graduates Emily Platt and Chris Njogu will study for Masters degrees financed by ROKIT's Jonathan Kendrick, while ex-Force India F1 team owner Vijay Mallya is supporting new undergraduate Daniel McIlroy.

BREMBO – 800 NOT OUT

Italian braking systems manufacturer Brembo celebrated its 800th Formula 1 grand prix involvement at the Russian GP. It first supplied Ferrari with cast iron discs in 1975 and has won 455 races, of which 186 were scored by Ferrari.

RADICAL SETS BENCHMARK

Sportscar manufacturer Radical has revealed that its 425bhp SR10 model is the fastest-selling car in its history. The Peterborough firm's 50th SR10 reached customer hands in September, nine months after the first. Its predecessor, the SR8, took four years to hit the same tally.

NEW GOODRIDGE BASE

A new design office in Northampton has been opened by Goodridge, a leading supplier of fluid transfer systems to motorsport based in Exeter. Head of Engineering, Innovation and Product Development Anthony Joy said the company has expanded "to enhance the engineering services we provide to our customer base".



TOYOTA TO ENTER NEW CAR FOR DAKAR 2022

Toyota has pinned its hopes of a first Dakar Rally win since 2019 on its new GR DKR Hilux T1+, which is currently undergoing development ahead of the 2022 event.

The new car will share key components with the current Hilux that has been in service since 2018 and has finished second in each of the past two seasons with 2019 winner Nasser Al-Attiyah, but several key elements have been changed.

These include the engine, with a 3.5-litre twin-turbo V6 replacing the naturally aspirated V8. Other changes, in line with revised T1 class rules, include greater suspension travel, plus increases in tyre size and tread depth.

Team principal Glyn Hall said that testing is "progressing well, and we are confident that the new car will allow us to compete on a new level, come January".

Toyota's four-car squad will face renewed competition next year, in the forms of Audi's electric RS Q e-tron and the revamped Prodrive-built BRX Hunter.



REMOTELY DRIVEN EV GETS DEMONSTRATION ON DTM BILL

The DTM successfully demonstrated the remote-control capabilities of its all-electric prototype last month with a live run at the Red Bull Ring.

Reigning DTM Trophy champion Tim Heinemann drove the 1200bhp DTM Electric car – equipped with Schaeffler's drive-by-wire system to remove the need for a physical connection from the steering column to the transmission – from AVL Racing's simulator in Graz, 50 miles away.

The test was managed by two AVL Racing Simulation and Software engineers, Ull Thaler and Franz Reisenhofer, who rigged a microphone from the live car and created accurate models of the brakes and tyres. A mix of fibre cables and 5G ensured a stable connection between the simulator and car at all times, and an automatic shutdown mechanism was established in case there was a delay greater than 0.3s in sending inputs from the simulator to the live car.

The DTM Electric car is set to make its next public appearance at the Norisring next month. Series organisers plan to create a new spin-off series based on the prototype for 2023.

SVEN HAIDINGER



DRIVING CHANGE LUCAS DI GRASSI

WHY ELECTRIC RACING CARS SHOULD BE FOUR-WHEEL DRIVE

Circuit racing has traditionally eschewed the equal distribution of power, but for Formula E it's a perfect fit

I've had the opportunity to drive many iconic cars with Audi, and getting to try the S1 Quattro recently was particularly special. That was the car I played with on my sofa as a little kid – the S1 was born the same year I was in 1984. This was a period when the Quattro four-wheel-drive system became very famous on road cars, having been proven with great success on the rally stages.

It was an interesting opportunity to compare against the new electric RS e-Tron GT to demonstrate the differences between a combustion engine and an electric motor with Quattro capacity.

In the S1, I had several runs up the hill in San Romolo with the 1984 WRC champion Stig Blomqvist sitting next to me. He told me that he used to drive front-wheel-drive cars in his early days, and when he first drove the Audi Quattro it was a big step forward in terms of traction.

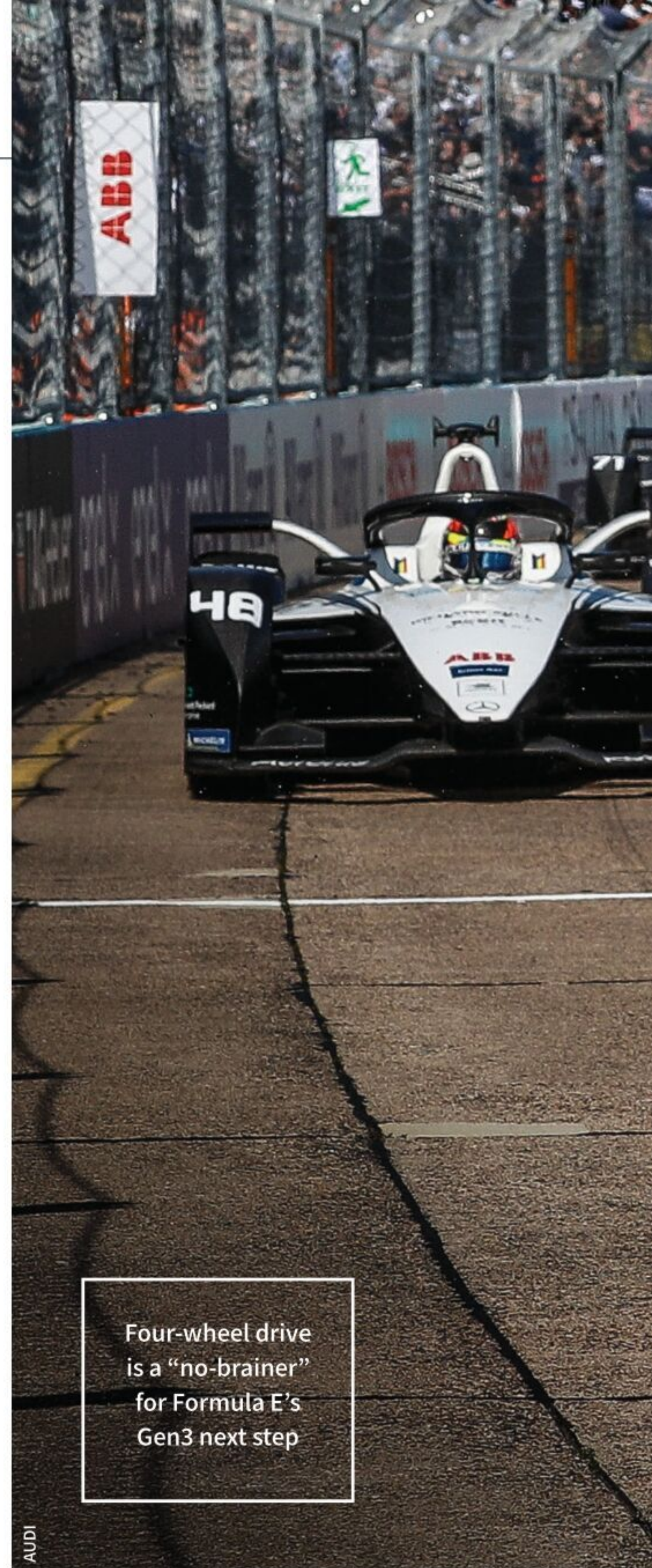
The first thought you have when you're about to drive the S1 is that it will be everything you dreamed of as a little kid and more. But the reality is that technology has evolved so much over the past 40 years that, by contrast with modern cars, the S1 is extremely difficult to drive.

I didn't push the car anywhere near its limits, but that wasn't necessary to understand what it would have been like for Stig, Hannu Mikkola and Michele Mouton on the rally stages. For example, the S1 has an H-pattern gearbox so it takes time to shift up or down, and the turbocharged engine has a very narrow rpm band. If you don't get it exactly right through a low-speed corner, the car feels like it just stops.

You had to heel-and-toe to change gear, and at the same time you needed to keep the throttle pressed to maintain the turbo pressure. Stig was braking with the left and with the right foot pretty much in every



Tough-to-master Quattro S1 gives insight into limitations of old-school tech



Four-wheel drive is a "no-brainer" for Formula E's Gen3 next step

corner, which was very impressive to watch. But you need years of experience to master that technique. It was clear to me how today, not only are the cars much faster but they are also generally much easier on the driver.

This is the case whether you have a four-wheel-drive system or not – it's mostly down to modern electronic controls that determine how easy cars are to drive. I've heard a lot from the FIA that four-wheel-drive cars are easier to drive than a FWD or RWD, like the Gen-2 Formula E car or the Audi R8 LMS GT3 I'm racing in the DTM, but that's not the case at all. It's just a different technique that has its own challenges.

For example, in my last year of LMP1 with Audi in 2016, we had around 500 horsepower on the front axle from the electric motor and 500 horsepower on the rear axle from the turbodiesel combustion engine, with a huge lag. Whenever you touched the throttle coming out of a hairpin that involved accelerating and turning, like the Turns 2-3-4 complex at the Shanghai International Circuit, the front axle wanted to instantly give the power while the engine was charging



the turbo at the rear, which meant the car would understeer and then oversteer as the control systems tried to distribute all that horsepower. As a driver, you had to be on the right line and use the throttle in the right way to maximise the slip angle and ensure the car had enough longitudinal potential.

Away from the rally stages, the limited use of four-wheel drive in top-level circuit racing today is a factor of regulations rather than technology. When regulations don't constrain technology, naturally the cars will go in that direction if there is the budget and the knowhow to make it work. We saw that this year at Le Mans, with Toyota winning the Hypercar class over the two-wheel-drive Glickenhaus.

Famously, four-wheel drive was a failure in Formula 1 in the 1960s, with Colin Chapman forced to abandon development of the Lotus 63. But if it was allowed today, you would expect F1 teams to use it because four-wheel drive allows you to optimise the capacity of the tyre in every direction – acceleration, cornering and braking. It's the same story with Formula E, where I believe it's a no-brainer to adopt four-wheel drive.



Most electric sportscars follow this philosophy – the RS e-Tron GT has one motor on the front and rear axles, and no mechanical connection between the two axles – because you can have so much regenerative braking from the front axle. The way weight distribution works means that when you brake, you have more capacity at the front.

The weight added from putting

an electric motor at the front of the Gen-3 Formula E car could be offset by removing weight from the battery capacity, which you could do because of the extra recuperation given by the front axle. You would gain power with the same range, and use much less of the mechanical brakes because the energy recuperated under braking would also be increased. If it can be done in a ►

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Fluid dynamics

Regenerative braking could be harnessed more effectively by front axle's own motor



cost-effective way with a fixed torque distribution, there is basically no downside.

The question then concerns what set-up is best for a four-wheel-drive configuration. Do you do it with a single engine and a mechanical diff, two motors on the front and rear axle, or one independently powering each wheel? Depending on how much torque each motor has, and if you can break the traction limit upon acceleration, the optimum solution is having a single electric motor connected to each wheel that allows for full torque vectoring on the car.

If you add to this all-wheel steering, so each wheel is steering and accelerating independently, then you have the optimised solution for any car. That's the holy grail of racecar engineering where you cannot do anything more to maximise the tyre contact patch and no compromise is needed. This is impossible to do with combustion engines because you always have a mechanical device distributing the torque. With the electric motor, that's not the case because you can have each independent motor working at millisecond frequency to change the

“The possibilities for four-wheel drive are only just beginning to be fully explored”

torque powering each wheel.

But this brings other questions. How much assistance is too much?

One of the discussions we have had at Roborace concerns the level of assistance that a driver should have when comparing their performance against a fully autonomous algorithm-driven car. Where an AI car can be set up so that each wheel is controlled independently at any given point, even the most skilled human driver can't possibly do that. So when judging the capability of the human, do you allow the computer to distribute the torque on top of your driving skills, or should it be all about

the inputs given to the car by the driver, as it was with the S1?

If you say that the human and the autonomous driver should be considered totally separate, that the human can only control what they are capable of and the computer can control pretty much everything, then the computer is already faster than the human by far. But if you allow the human to be in partnership with a computer, they are still faster than the computer alone for the time being.

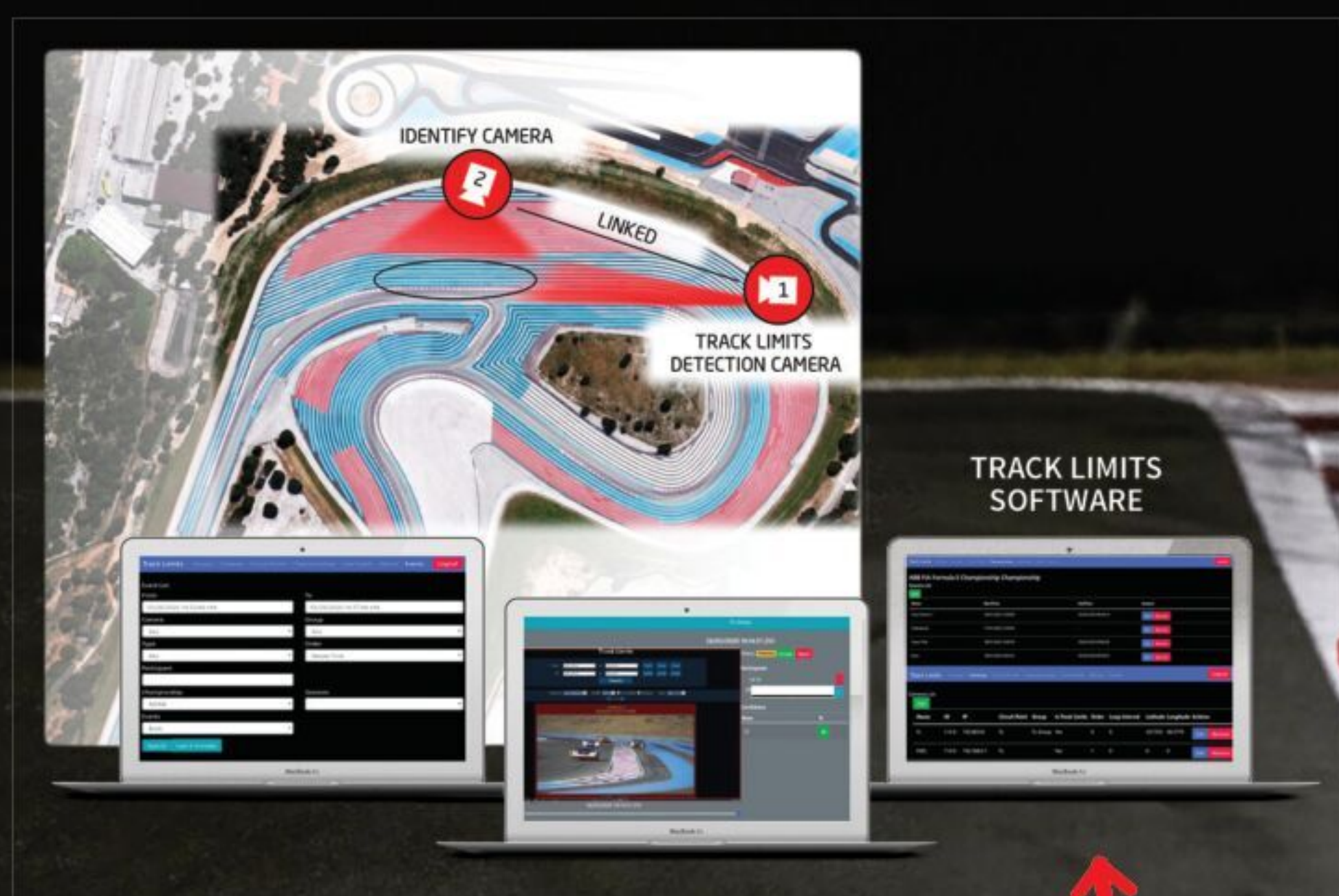
The possibilities for four-wheel drive are only just beginning to be fully explored and can go in all sorts of avenues in the future. As I've said before, I think there is value in pushing the limits of technology for autonomous vehicles, but this doesn't have to be at the expense of traditional motorsport with gladiators behind the wheel who fans follow and admire. They can exist alongside each other as two semi-separate spheres.

If more series organisers decide to allow four-wheel-drive cars, but with a fixed torque distribution to still have this human input into the car as much as possible, then it won't detract from the spectacle for fans, even if you would likely see much more V-shape cornering than with only RWD because the front tyres would be optimised for acceleration.

There are companies out there that specialise in retrofitting classic cars with the latest technologies to make them more efficient. But should we do this with the S1? For me, the right approach is to keep the cars that we dreamed of as kids the way they are, with the sound they have – the S1 is just amazing when you change gear – and bring the new technology with the new cars. ■

Roborace car can take independent control of each wheel way beyond human capacity





Policing the limits

POLICING TRACK LIMITS IS A GROWING

issue in motorsport and the ability to make quick, accurate decisions is crucial to the smooth running of professional events. As a trusted partner to the FIA World Endurance Championship, 24 Hours of Le Mans, Formula E and many international Grade A circuits, with a reputation for quality in the fields of timekeeping, TV graphics and IT services, Spanish-based electronics provider Al Kamel Systems knows this all too well. That's why it has busied its in-house team of software developers to meet the market need for a Track Limits System that can be fully integrated with existing timing infrastructure.

Boasting software developed from the ground up, the Track Limits System applies all of the company's extensive learnings since it was founded in 2003. Alexander Winkler, Head of Business Development at Al Kamel, is confident that the built-to-spec solution combines ease of use with accuracy and speed.

"We trust in it and we believe it is the best

one on the market because we have a several-layer verification process, it's not just based on image," says Winkler.

Al Kamel's timing system is overlayed with a video identification system – using cameras that shoot in Full HD resolution to identify minute infringements – that allows the race director to make informed decisions quickly and confidently.

"We have the trigger zone built into the software that gets checked with the timing loops just before and after the zone to define the car number," says Winkler. "This also helps to determine whether the driver gained an advantage or whether the infringement was purely to avoid a collision.

"It's easy to use, the software does most of the work. When the image is verified, a report is automatically generated and sent to race control. Then it just needs to be confirmed and they can decide what penalty to enforce. Likewise, it will be possible to automate the entire process by establishing

communication with the timing system."

Al Kamel provides full installation and follow-up support to circuits, working with them to find a bespoke solution that matches their requirements and technical assistance at events.

Winkler explains that Al-Kamel's "only restrictions concern what the hardware can do" as its software can be adapted and combined with other elements at request as part of a turnkey package.

"Pretty much anything that a customer needs is possible, even if it comes to sound monitoring around the track," he says. "Anything that has to do with race electronics, we can adapt to exactly what they need, so it's fully customisable in all regards."

Circuits using the Track Limits System have given positive feedback. The Circuit de Barcelona-Catalunya's general manager Josep Lluís Santamaria explains: "The implementation of Al Kamel's Track Limits System has met our expectations, as it allows us to improve in terms of safety and gives us the opportunity to keep our progress in terms of technological innovations applied to competition.

"Not only is it a tool that allows us to analyse infringements with the maximum possible objectivity getting image and video records, but it also plays a very important role improving participants' safety."

Event promoters can rent the systems on an event-by-event basis, and Winkler says Al-Kamel is dedicated to "making it as easy and as cost-efficient as possible to install, manage and dismount".

For more information about Al Kamel Systems and its Track Limits System, visit WWW.ALKAMELSYSTEMS.COM





ENGINEER'S VIEW SEBASTIEN VIGER

JOY AND DESPAIR AT LE MANS FOR TEAM WRT

The renowned GT operation made the big step up to LMP2 this year and won at Le Mans first time out, but this was tainted by a lost 1-2, as the Belgian squad's technical director explains

It should be the happiest moment of your career to win Le Mans. There are engineers and mechanics that try for all their career and they never manage it, or to even be on the podium. It was such a feat to be there on the first participation for WRT after six or seven months, pushing like crazy to man the programme.

When it was clear that the DTM would not carry on in the form that it was last year, we wanted to keep the people we had on board busy with a similarly high-level championship. But it was only in January that we had the real green light, and the market of good players to complement it from sportscars was obviously a bit thinner than if you start recruiting in October.

Once we got the confirmation that we would have one car in the World Endurance Championship and one car in the European Le Mans Series, and that they would most likely both be at Le Mans, it was clear that we needed to have two separated car crews. We've got Jonas Vanpachtenbeke, the programme manager, engineering the WEC car and Jerome Plassart on the ELMS car.

We wanted to be completely open-minded on the set-up solutions we needed to try, and we were lucky that there's been

a big change for this year with the new tyres from Goodyear, so it was completely shaken up for all the other teams too. Retrospectively, that helped us a lot.

We arrived at Le Mans just trying to get the basics right and taking the safest strategy decisions for the first six hours, because we were afraid to screw ourselves taking the wrong decision. But fortunately, we did the right calls, the pace was there as well and some of our biggest competitors made mistakes. It was the early morning when we saw that we had some advantage on the pace compared to the others and we said, 'OK, we actually we may win this

“If you went to Hollywood to see a movie of this, you would say, ‘No, no, it’s too much’”

thing.' But we didn't want to think about it because, funnily enough, we had the 2016 Toyota story in our mind. We also had lost the 24 Hours of Spa 10 minutes before the end two weeks before, when the Ferrari overtook us. But we didn't really think it could happen to us – and then it did.

For the last lap of the race, we were fairly

confident. The #41 guys did everything perfect in the last hour, kept the car out of trouble and kept up the pace. Almost every car has a small issue at some point at Le Mans, but there was nothing that would cause us to expect something to go wrong.

Myself, Vincent Vosse, Thierry Tassin and Pierre Dieudonne were on the back office looking at the telemetry and we could not believe what was going on. It was kind of a nightmare; you don't realise what you have seen on TV four years before is happening to you after 18 hours in the lead.

We had an electrical issue which put the #41 in a state where it couldn't restart and

finish the last lap in the time allowed to be classified P3. But on the day after when the car came back from 'the cemetery', as they call it, we did all the procedures to start the car and it started! I was in scrutineering and I couldn't believe it. It's still under investigation now.

But the #31 car that didn't pit for fresh tyres for four hours without the working airjack managed to win, seven tenths ahead of P2, nearly crashing into the flag man. If you went to Hollywood to see a movie of this, you would say: 'No, no, it's too much. It can't happen like this.'

In the end, we didn't celebrate the win like we should have, because we were half-happy and at the same moment half-devastated for the #41 car. Crew members were crying and five minutes after they are jumping around celebrating. It was surreal.

It's only in the months after that you realise what happened. In the moment, you don't really know how to feel – you lose Le Mans on the last lap and you win Le Mans at the same time, which is a weird feeling. ■



L-r: Frijns, Habsburg, Milesi and boss Vosse celebrate



The #31 car narrowly held on at the flag after #41 ground to a halt

BRECHT DECANCO

ENGINEERING

BMW



M6 GT3

FAREWELL TO BMW'S UNPOPULAR WINNER

The BMW M6 GT3 has won most of the big prizes in endurance racing, but key weaknesses meant only a devoted few teams persisted with running it

BY JAMES NEWBOLD



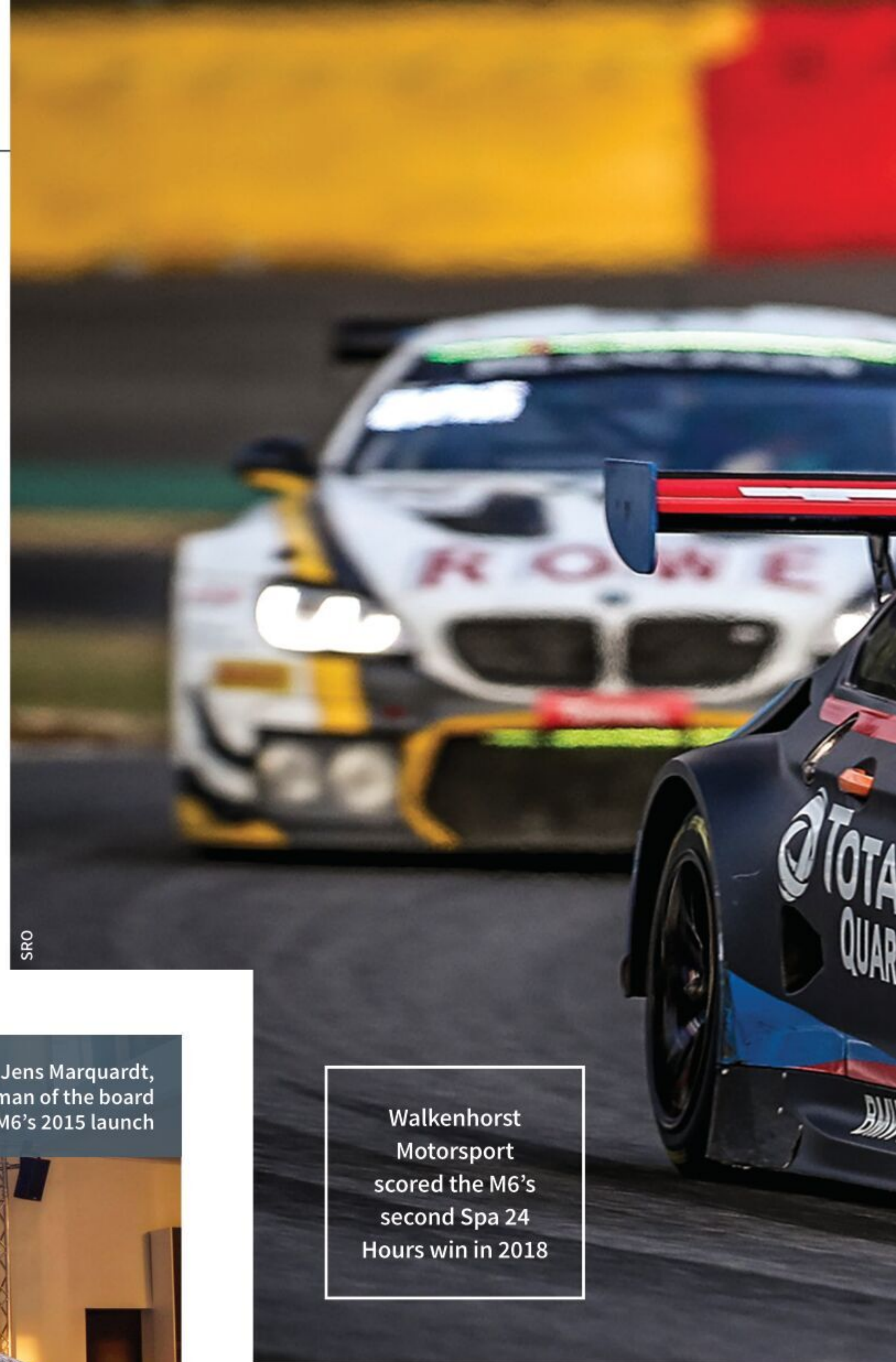
It has a roll of honour that would be the envy of many major manufacturers. Twice a winner of the Spa 24 Hours, the BMW M6 GT3 has conquered the Nurburgring 24 Hours, the Macau FIA GT World Cup, and been a serial winner in the Nurburgring Langstrecken Serie (NLS, formerly VLN). One of four cars to win a race in the first season of the DTM's new era in 2021, it stands a good chance of winning two major titles in its swansong season, five years after its 2016 introduction.

So it will be remembered fondly in the history books. Yet for all its on-track successes, the M6 GT3 has been commercially unsuccessful beyond a hardcore base of stalwart BMW squads that have kept it winning against more fashionable opposition, and unpopular with amateur drivers who are the backbone of the global formula. ►

In an era when GT3 cars are increasingly homogenised by a requirement for customers of variable experience to be capable of driving fairly close to the limit that a professional can extract, the M6 has been something of an outlier. It excels in high-speed corners, but has traditionally struggled with the tight, twisty sections where the majority of lap time is to be found. It's perhaps no surprise that the M4 GT3 due to replace it next year is intended to be more of a compromise.

"I'm looking forward to a more well-rounded car that has a chance on some of the tighter road courses," says stalwart M6 runner Will Turner, whose eponymous Turner Motorsport squad has entered the car in the IMSA SportsCar Championship continuously since 2016. "I would give up the strengths of the M6 in the high-speed stuff for a more well-balanced car in everything else."

But, as Turner points out, the end of the road for the M6 could also prove to be a significant philosophical moment as BMW toes the same line as everybody else. "You can also argue the point of, 'If all the cars are generic and they all do everything pretty well, then what's going to separate the character of the cars?'" he says. "It's going to be a bitter-sweet ending to the M6."



SRO



Ex-BMW Motorsport boss Jens Marquardt, Jorg Muller and chairman of the board Frank de Meel pose at the M6's 2015 launch

BMW AG

Walkenhorst Motorsport scored the M6's second Spa 24 Hours win in 2018

"The BMW was maybe the strongest car in some tracks but the weakest car in others"

WEAK POINTS HURT CUSTOMER INTEREST

The Z4 that preceded the M6 was, according to the M6's chief development driver Jorg Muller, "a short-wheelbase beast". Making the M6 a more comfortable car that was "a lot less nervous to drive" was therefore a key priority. So too was honing the driveability of its 4.4-litre V8 turbo engine, a new development after the normally aspirated V8 Z4, which had won the 2015 Spa 24 Hours and the 2014 British GT title.

Alexander Sims, who had co-driven with Barwell Motorsport's Marco Attard in all but one British GT round in 2014, found the M6 to be "enjoyable to drive from the off" and recalls being surprised at "how nimble it felt considering its size" – at 2901mm, its wheelbase was 39.2cm longer than the Z4.

"The high-speed strength of the car improved from the Z4 to the M6; it became a real winner in fourth, fifth, sixth-gear corners compared to pretty much all of the opposition," asserts Sims, who won the Spa 24 with the M6 in 2016 and followed up with the Nurburgring 24 in 2020.

Walkenhorst Motorsport team boss Niclas Konigbauer says there's a "big difference" in character between the "reactive" Z4 and M6. But the latter was not without its flaws. "The traction control was a little bit difficult to handle, especially for guys who

were used to the naturally aspirated engines and so on," he explains. "To find the last seconds you need to be quite technical to really squeeze out everything."

Sims's dual programme between the M6 in the Blancpain GT Series for Rowe Racing and selected British GT appearances in Barwell's Lamborghini Huracan in 2016 was "a big eye-opener" in "how it favoured those that weren't able to rag the car corner after corner, lap after lap".

"Although the high-speed stability of the Lamborghini was weaker than the BMW, in pretty much every other phase it was as good or better," he says. "From the word go, the M6 was quite a Pro driver's car. It really needed to be hustled and the performance of the car came from it being quite light on the rear end and moving around, which I enjoyed. However, I think everyone would admit that has possibly been one of the aspects of the car that has been its downfall in customer racing."

"If you go through Pouhon [at Spa] or Signes at Paul Ricard 5-10km/h slower then you're probably talking about 0.1-0.3s, which for an amateur is not a massive problem to lose. But if you don't have confidence on the exit of slow-speed corners, you can lose 0.2-0.3s and there are generally four or five of them on every track compared to one or two super-high-speed corners."



It wasn't just difficult for amateurs to master. Maxime Martin, who joined Sims and Philipp Eng to win the 2016 Spa 24 Hours, explains that "it suits some tracks very well and some very badly".

"As soon as you go to traction phases or quick changes of direction, with the big engine at the front and the long wheelbase, that's where the car is quite weak," he says. "You have some cars which are maybe not the best on any track, but always more or less good everywhere. The BMW was maybe the strongest car in some tracks but the weakest car in others. It was more up or down, it didn't have this average everywhere."

Even with the Balance of Performance playing its part, this meant it was hard for the M6 to remain competitive over the course of a championship, and Teo Martin Motorsport's six International GT Open wins in 2016 have proved the exception rather than the norm. In IMSA, Turner Motorsport has won at least one race every year since 2016, but wasn't a consistent threat until current GTD title contenders Bill Auberlen and Robby Foley paired up for 2019 (see page 16).

As Sims puts it, the M6 has tended to be "sufficiently weak in slow-speed corners that with more than really one slow-speed corner on a circuit, you could be hamstrung significantly".

"There would be too many tracks where you were fighting those deficiencies," Sims adds. "At Brands Hatch GP, for the bulk of the track we were in the mix but at Druids we'd lose 0.25s. Suddenly the gap to everybody is created in one corner and it would be difficult to make up for that."

SPECIALIST'S CAR PRODUCES SPECIAL MOMENTS

The M6 finished sixth in class on its debut in the 2016 Daytona 24 Hours with Turner Motorsport, before Sims and Eng scored the M6's maiden European podium with second place in the first race of the 2016 Blancpain GT Series, a night-time 60-minute Sprint qualifier at Misano. But Sims is quick to point out that the circumstances of the result were "very fortunate", having been "nowhere" driving the wet track on slicks until conditions started to come to him and a fortunately timed full-course yellow thrust him up the order. "It wasn't really where we were pace-wise," he says.

Sims describes the car's first year as "relentlessly difficult", until the "hugely unexpected" result at Spa. After qualifying only 19th, the Rowe crew capitalised on the majority of the dominant ►



Mercedes being given five-minute stop-go penalties for technical irregularities in Superpole, and operational errors from Bentley, to score the car's first major victory.

"In practice and qualifying we weren't spectacular at all, and even throughout the race our pace wasn't that of the competitors," says Sims. "But one by one, they fell over themselves and we had a remarkable race. We were maximising what we could of the package absolutely that day."

Updates are permitted once per homologation cycle and BMW's 'Evo' kit, targeted at improving driveability to be more consistent over a stint and component durability, was introduced for 2018, following a 2017 campaign that had few real high points for the car. Konigbauer says the Evo kit "changed a lot", but it made little difference to customer interest.

"Compared to some other cars, I think it's still not the easiest car to drive on a normal GP track," he says, "but it's much better than at the beginning."

But on circuits where the M6 was created to thrive, it did so. In Walkenhorst's first time running a Pro class entry at Spa in 2018, it led home Rowe in an M6 1-2 with Eng joined by Tom Blomqvist and Christian Krognes. Later that same year, Augusto Farfus qualified on pole at Macau and staved off race-long pressure to score what turned out to be Schnitzer Motorsport's last big win on the international scene. It was the final race at the helm for long-standing team boss Charly Lamm, who died just two months later.

BMW's reduced presence in the GT World Challenge Europe (formerly known as Blancpain) – with no cars in Sprint and only sporadic Pro entries in Endurance from 2019 – meant new arrival Nick Yelloly's first customer programme came in the China GT series. With experience of running on Michelin tyres in China, Yelloly reckons the Pirelli currently used by his Schubert Motorsport team in the German ADAC GT Masters "exaggerates" the M6's tyre wear issues. "The car in general is a bit harder on tyres than the other manufacturers around us, but that will be fixed next year when we've got the M4," he says.

For ex-Porsche racer Yelloly, tyres are only one element



Farfus (with Lamm) took poignant 2018 Macau win for Schnitzer



of the challenge. "The window of operating at a very high level is small – that's a problem we've always had with the M6," he continues. "Even some of the factory drivers that are doing a completely different programme, when they're thrown into an M6 on the Pirelli, it's not possible

just to be bang on the pace of someone that's driving that car day in, day out."

Together with Sims and Nicky Catsburg, Yelloly ended BMW's 10-year wait for a Nurburgring 24 Hours victory in 2020 when Rowe responded quickly to a late rain shower and usurped the rival Audi, going some way towards avenging the defeat of Sims and Catsburg to the same manufacturer in 2017. Yelloly followed it up with pole in torrential rain for this year's race, and is one of several British talents to have used the M6's affinity with the Nordschleife to winning effect, along with 2020 NLS champion David Pittard, BRDC Rising Star Ben Tuck and BMW junior Dan Harper.

EXPERIENCE COUNTS

Konigbauer estimates that Walkenhorst has put "around 400,000km" on its fleet of M6s since 2016. It claimed the 2020 Intercontinental GT Challenge title with Farfus and Catsburg

THE SIX-YEAR ROAD TO IMSA TITLE CONTENTION

Turner Motorsport boss Will Turner says he was "definitely surprised" to find that no other teams were running the new BMW M6 GT3 in the 2016 IMSA SportsCar Championship. His squad remains the only one that has raced the car in the series and, with the line-up of Bill Auberlen and Robby Foley in their third year together, is firmly in contention for a 2021 GTD class title that would be a fine way to send off a car that Turner admits initially "wasn't fully sorted out" when he first took delivery prior to the 2016 Daytona 24 Hours.

The car suffered "a lot of little gremlins" at the pre-event 2016 Roar test, the timing of which, says Turner, "caught BMW off-guard".

"At first, we thought, 'This car is going to be

a nightmare', but it was really just because Daytona came so early," he says. "After that, the car has been awesome."

The M6 runs on Michelin tyres in IMSA, having initially used Continentals in 2016, and Turner has also run the car on the Pirellis in SRO World Challenge America. While the set-up differences needed to optimise tyre performance are considerable, Turner explains that the "inherent characteristic" of struggling in tight, low-speed corners is no different. He says its main weakness has been the gearbox – also its biggest expense – without which the M6 "would be one of the best racecars I could imagine".

A rotating cast of drivers until 2019 meant the M6's IMSA successes were fleeting, but

Turner has benefited from the stability brought by classy veteran Auberlen and 25-year-old student Foley, winning six races over the past three years. Their last-gasp triumph at Petit Le Mans in 2019 together with Dillon Machavern, when the rival Riley Mercedes ran out of fuel on the final lap, is the race Turner picks as his favourite to date.

The crew lies fourth in the standings with two races to go, although Auberlen and Foley held a 27-point advantage prior to an ABS failure last time out at Long Beach that cost four laps. But Turner still has faith in his team's title chances. "It's a combination of the crew, knowing the car and the driver line-up," he says. "All the planets are aligning."



Wittmann's form is keeping M6 in the hunt for DTM title

thanks to wins at the Indianapolis 8 Hours and Kyalami 9 Hours, the latter amid a lightning storm. Naturally, as a result, its ideal set-ups are well-known.

"The M6 now because of its age, we don't really work on set-up at the Nurburgring, we know exactly where the car has to be," says Muller, who scored the car's first competition win on the Nordschleife in 2016, sharing the Schubert-run machine with Marco Wittmann and Jesse Krohn, and still races the car today with Walkenhorst in the NLS.

"To jump in the car on the Nordschleife and to feel comfortable is quite easy nowadays in the M6," agrees Konigbauer.

Schubert has less experience with the M6 than Walkenhorst – after its initial success with the M6 in 2016, it switched to Honda before returning to the M6 for 2020 – but it has made big strides this year as a result of optimised weight distribution.

"I felt like in quali-trim we were still pretty good last year, but this year now we've got better race pace to go with it," says Yelloly, who scored three podiums from the opening five races of the 2021 ADAC campaign with Krohn. "If we can qualify it up near the front, we can hold our own, which is great at a track like Zandvoort which is relatively high-deg. Oschersleben in race one, which was completely dry, we finished fourth – you would not have expected us to do that last year."

Sure enough, the M6 is still capable of surprises. A stated aim for the new era of the DTM this year was to be the fastest GT3

series in the world – to achieve this, it has a bespoke BoP that differs from SRO-governed series – and with a sprint format devised for single drivers, it differs greatly from the rest of the GT landscape. But with Michelin tyres under the car, Walkenhorst driver Wittmann has surpassed expectations to contend for his third DTM crown.

After struggling in qualifying during the early races, a test before the early August Zolder round to improve qualifying performance and understanding of tyre warm-up procedures on out-laps yielded immediate results, Wittmann scoring the car's first DTM pole and win. At Zolder, a circuit with three chicanes

"The biggest advantage of the M6 is that the team and the drivers know the car and its capabilities"

and lots of traction zones, the epitome of the kind of track where the M6 has traditionally struggled, Konigbauer admits "we did not expect at all to be successful".

"We tried a lot of different things you would not normally go on the M6 set-up wise," he says. "If you see the race pace, for sure we were not the quickest car. The pole position was the key point to win the race and a solid pitstop."

Only a rapid pitstop for AF Corse Ferrari driver Liam Lawson at the Red Bull Ring denied Wittmann another likely victory from pole, before the German made amends with a stirring drive at Assen. But Konigbauer rejects the view that the single-driver nature of the DTM has been a factor in its form upswing.

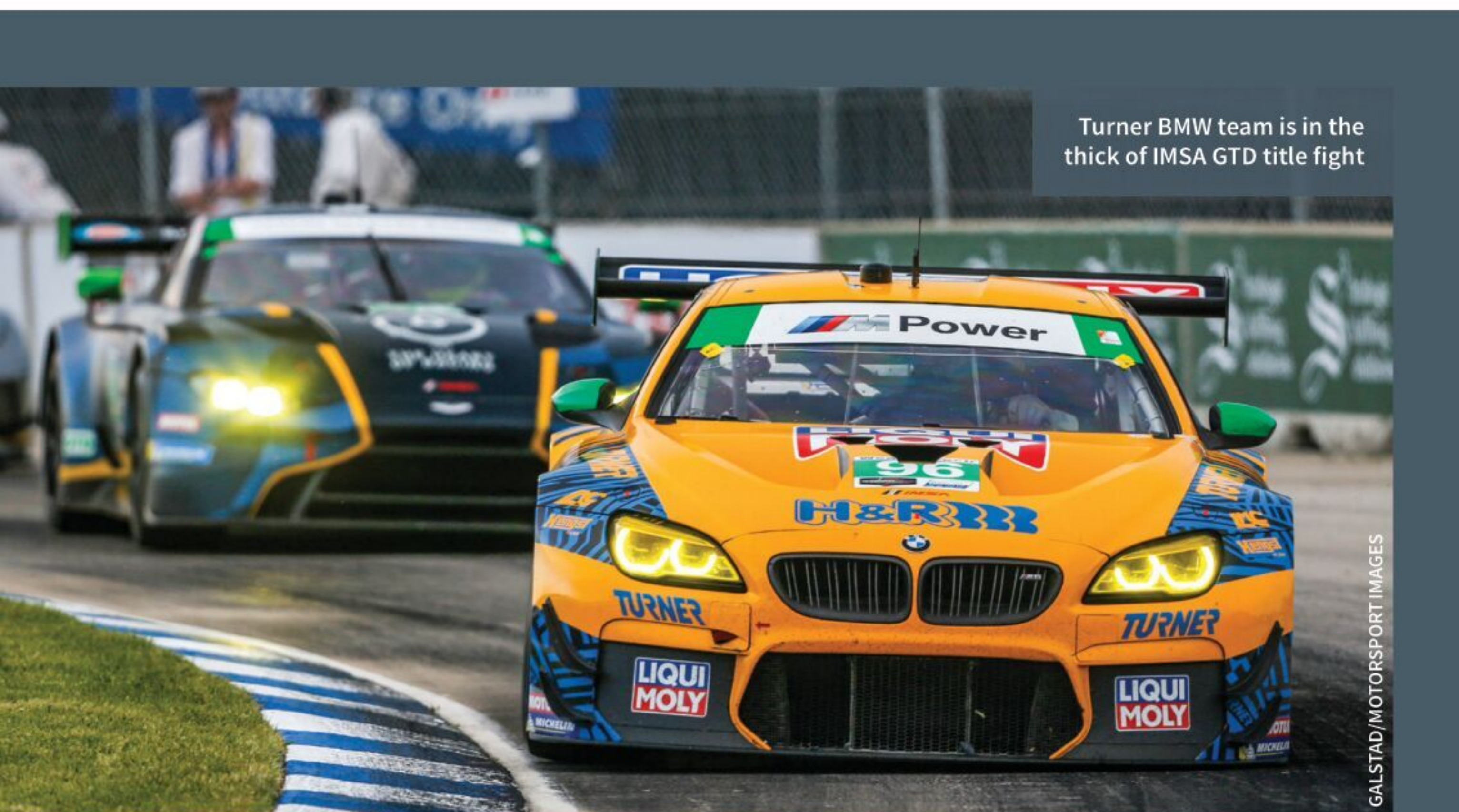
"It doesn't matter which car you are using, you will always find some little things to fine-tune," he says. "It just shows that we are into all details and trying to maximise the performance. It's the same advantage or disadvantage through the whole field."

While all BMW competitors have high hopes for the M4 – Yelloly's experience from testing is that the marque has learned the lessons from the M6 in terms of being more accessible "without having the car completely dialled in" – the storied M6 GT3 will still be fondly remembered given its remarkable longevity.

"I'll miss it," says Yelloly. "It's got some particularly good traits, and when you get a clear quali lap at the Nordschleife onMichelins when it's a bit cooler and the aero is working well, I don't think there is anything faster."

Having worked on the car for so long that it now "fits like a glove", Turner says he feels "conflicted" on the M6's imminent passing. "The biggest advantage of the M6 is that the team and the drivers know the car and its capabilities," he says. "The M4 is going to be a better car but there's going to be a learning curve, so I'll be sad to see the M6 go in that way."

"I really like the car; so far we had our biggest success with this car," echoes Konigbauer. "We developed ourselves, our team with the car, so of course it's for us a big change. But I'm also quite sure that with the M4 GT3 we'll have a rock-solid car and the starting point is easier than the M6..." ■



Turner BMW team is in the thick of IMSA GTD title fight

GALSTAD/MOTORSPORT IMAGES



GREEN LIGHT FOR THE BTCC'S HYBRID FUTURE

The Cosworth Electronics-developed BTCC hybrid system made its public debut in the most recent round at Silverstone. It's simple, but could significantly change the series' technical challenges

BY MARCUS SIMMONS

PHOTOGRAPHY JEP

The push-button future is already here. The British Touring Car Championship heads into an era of hybrid power in 2022, and the series' cognoscenti got a glimpse of it at the recent Silverstone round. There, 2013 champion Andrew Jordan drove a Speedworks Motorsport-built Toyota Corolla in free practice, qualifying and the races, using the new-for-2022 M-Sport-produced TOCA customer engine and Cosworth Electronics' hybrid system.

Cosworth was awarded the tender by BTCC organiser TOCA in July 2019 and started development the following month on the hybrid system, which will cost £20,500 per season per car to lease. By the summer of 2020, it was running on the track. That gave Cosworth a decent lead time to get things running smoothly,

even amid the COVID-19 backdrop.

"The focus with the testing we've done has been on the hardware validation," says Cosworth Electronics head of support Neal Bateman. "We've completed over a season's worth of mileage on all the hardware components and the kit on the Toyota. It's been made slightly more challenging under COVID being able to rent race tracks and go out testing, but it hasn't really impacted the timescale, just the order in which we do things. We've been making sure we have well-proven, reliable hardware before we distribute it to teams and get racing."

One of the most significant aspects of the hybrid is that it brings an end to the traditional success-ballast system. Jordan used 15 seconds per lap of hybrid power – boosting engine power by 10% to approximately 440bhp – at Silverstone.

Exact details on the sporting regulations haven't been worked out yet, and are subject to testing data, but TOCA supremo Alan Gow says: "That [15s] is the maximum we would deploy the hybrid for. We may reduce it for some [shorter] circuits but maybe not. That's all part of the challenge."

Instead of success ballast, the amount of hybrid power available to the championship top 10 (or top 10 finishers in races one and two on a weekend) will be reduced from that nominal 15s on a sliding scale for qualifying, and for the number of laps you can use it in the race. Again, this is subject to accumulation of data, and could be changed during the season. "It's a learning year in some respects," continues Gow. "If we have to tweak it then of course we will. That's for the boffins to sit in front of their computers and work out on their spreadsheets, but it's



Jordan made a BTCC race return, of sorts

incredibly easy to adjust if we get it wrong.”

As if to say ‘yah boo’ to success ballast, Bateman points out: “There’s a Delta battery that sits in the place where the ballast box would normally sit. There is a motor controller in front of that, so effectively an inverter, for the 60-volt system. And then going forward from that through the bulkhead, to our electric motor which sits on the side of the gearbox, are the main components and our vehicle controller, which controls both the internal combustion engine and the electric hybrid system all in one box. That bit is part of our electronics which will control the rest of the car in terms of the electrically powered parts.”

The difference between hybrid systems in the BTCC to those in Formula 1 or the World Endurance Championship is that they have to be bulletproof and affordable. “This

“If we have to tweak it then of course we will. It’s incredibly easy to adjust”

is going into a spec series [regarding control parts], so everybody’s going to get the same,” says Bateman. “And so things like the electric motor and the power controller are off-the-shelf pieces of equipment, which is what’s driving the price down to this more palatable level. This is very much about an integration exercise of getting this kit together using our electronics, using our partners at Delta with the battery. And a lot of the control in terms of the

things you’ll hear spoken about in F1, about regen and about how the battery and energy systems are being recovered, we’ve done all of the software for that. So from the teams’ point of view they’re going to get a rotary switch and a button to press for deployment, and that is it.”

Initial testing in the Toyota was carried out with the current Swindon-built TOCA engine before the M-Sport mill came on stream. “We’ve completed our validation alongside each other, so their engine is fully validated with the hybrid system on, which is important,” asserts Bateman. “And we have a great relationship with M-Sport anyway going back. We’ve been working with them for decades [primarily in the World Rally Championship], so it’s been good to develop the system with them.”

The first semi-public outing came at ►

the Snetterton test in July 2020. Following his recent divorce from West Surrey Racing, Jordan was approached by Gow to be the test pilot. But, due to his ongoing contractual situation with WSR, he was replaced by Darren Turner for the early work. At Snetterton, this comprised mostly out-laps. “It’s important to get confidence in the system, in some of the safety systems, in some of the code that we’ve developed as well,” explains Bateman. “So it’s very much going out and doing an out-lap, coming in and checking the system over, making sure hardware-wise, mechanically-wise it’s all functioning and behaving, and also spending a good amount of time analysing the data, making sure that all the systems we’ve got in place are functioning correctly, and then going out and basically doing it again. It’s quite repetitive but it’s incredibly important at that base level.”

Soon the ‘race runs’ began, with Jordan on board. “We did a lot of testing at different tracks, and very much it was about putting miles on it in a controlled way,” says Bateman. “So we were doing race runs effectively very early in the test programme, and then trying to replicate as best you can doing that sort of distance, and then waiting for the car to cool down, and waiting that [time] distance you get between races before going out and doing it again. So that

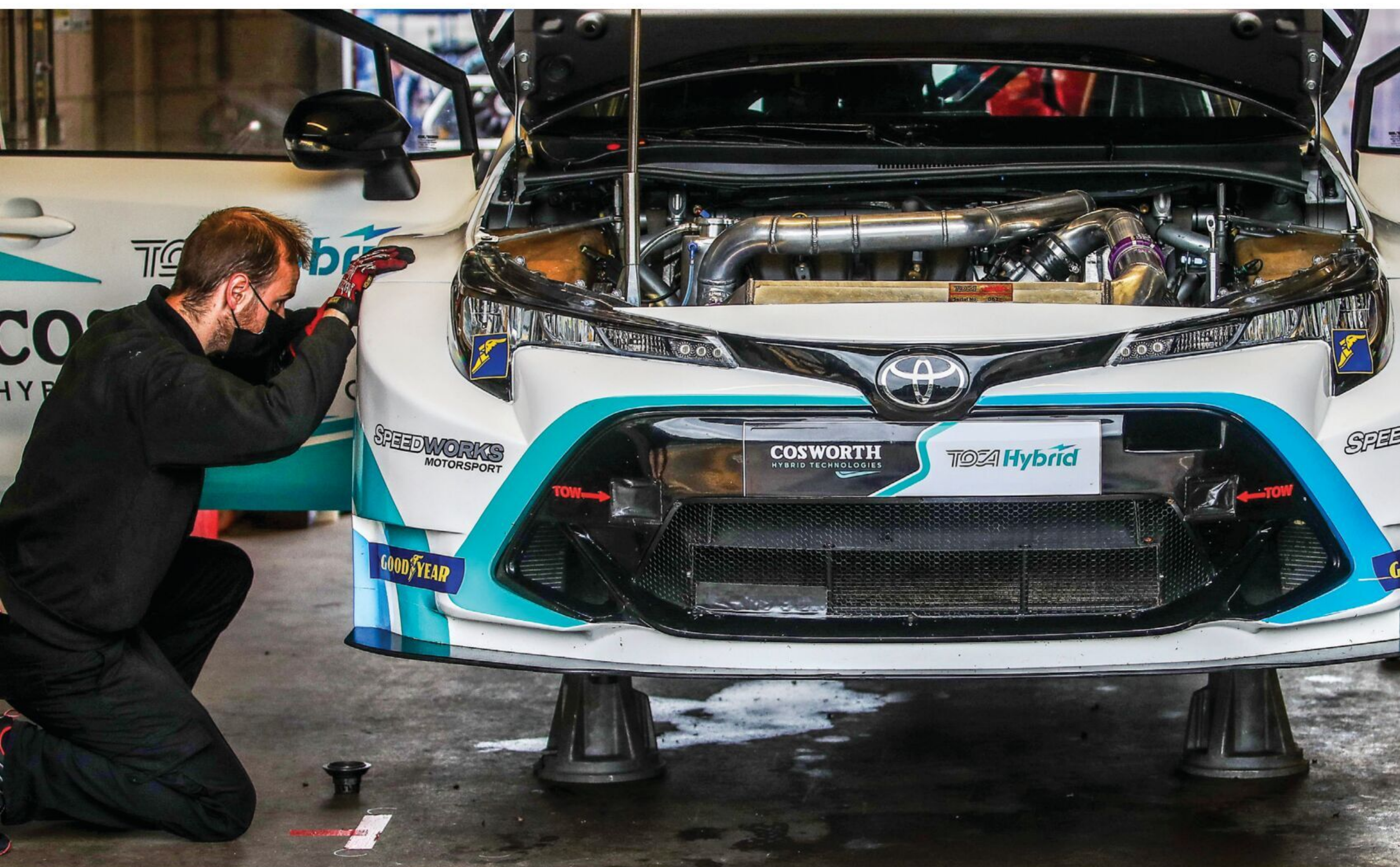
process started very early, but there is no substitute for actually going and doing a race weekend like we did at Silverstone.”

That plan was announced just after the July 2021 tyre test at Oulton Park, where Jordan racked up the laps during the second day. But it also was the root of the lack of performance in Silverstone qualifying, although race pace was strong: Jordan pedalled the Toyota to fastest lap in race two, and was among the quickest in the other two races. “It was a bit of a shame it rained at some unfortunate times at Oulton,” rues Bateman. “We were just getting ready to put in some quick laps and got the car ready and the tyres warm, all ready to go for a time, and it started

raining, so that was a bit frustrating. But in terms of through the speedtrap I think we were one of the fastest cars, which was encouraging, so it was a really important first step towards Silverstone in terms of running in public.”

As far as performance was concerned, a dry Oulton should have shown where the car was set-up-wise using the hybrid, on which the battery weighs 25kg, and the M-Sport engine, whose dry weight is approximately 15kg below some existing BTCC units. Jordan said that overall the car was “on the weight” of other cars, but the effect of the lighter engine is to shift weight distribution to the rear.

“It’s never just plain sailing because it’s



Oulton test went well before race outing



a big programme, big change, so it takes a bit of getting your head round in terms of what they need from me,” states Jordan of the hybrid work. “Initially it was just mileage on the whole system.”

Of the Silverstone run, Jordan adds: “I thought we should challenge for pole. But I didn’t think it was a foregone conclusion because all the people on that grid are at the top of their game, and fully up to speed with the car in terms of chassis balance and things like that, so I knew it would be tough to go in and blow them all away.”

Overnight work to deal with the effects of the shift in weight distribution paid dividends. “It’s not just a bolt-it-on-and-it’s-fine,” points out Jordan. “It takes a

bit of getting your head round from the team side on what you need on the chassis compared to normal. But come race day we were very strong. I think Alan Gow was quite happy with that, because it showed the potential of it, so from my point of view it was job done really.”

Can you feel the boost? “It depends where you use it,” replies Jordan. “If you use it down the second half of a fast back straight then you don’t really feel it much; if you use it coming out of a corner then you can feel it. It’s only subtle, it’s not like a massive increase in power, but you can just feel a little bit more assistance.”

It’s not just the M-Sport engine, of course, or front-wheel drive like the Toyota. The hybrid will also be equipping rear-driven machines such as the BMW 330i M Sport and Infiniti Q50. The BMWs and Dynamics’ Honda Civics use their own bespoke Neil Brown-built motors; ditto the Fords with Mountune. To that end, work has begun on an older-spec BMW 125i M Sport belonging to Ciceley Motorsport. “That’s good experience for us in terms

of the rear-wheel-drive installation,” says Bateman. “But the equipment mounts to the TOCA components anyway, so the electric motor goes onto the Xtrac gearbox, which is the same for everybody, and a lot of the equipment mounts onto the subframes, which are the same for everybody. So it’s not envisaged that each team’s installation will be wildly different to what it is on the Toyota or on the 1 Series.”

Over the past decade, Cosworth has supplied the electronics to the BTCC’s NGTC machinery, the kind of componentry that barely gets mentioned unless something goes awry. Now it will be at the forefront of the winter gossip. “It’s nice to have something out there that people are excited about, and it’s nice to have a test car going round there with our name down the side of it,” says Bateman. “It’s a proud moment. It’s just a button that they press to get 15 seconds of deployment, so there’s not quite as much engineering work as maybe they have at the moment to try and engineer 75kg [of ballast] into the car. I think the testing for that, we’re quite confident, will all go well. We’ll be doing training sessions with the teams, we’ll do an installation manual for the kit, an operational manual as well, so there’s lots of information flowing out to the teams, which is sharing our experiences of running the test cars with them.”

And of course, we mustn’t forget the drivers. The big question, bearing in mind there are some in the BTCC who are ageing businessmen rather than refined athletes, goes to Jordan. Is the deployment of the hybrid idiot-proof? “It’s pretty simple,” he laughs. “You literally press a button when you want more power...” ■



M-SPORT AND ITS NEW TOCA ENGINE

Hand in hand with the new Cosworth hybrid system arrives M-Sport’s customer TOCA engine to the British Touring Car Championship. As you might expect from the Cumbrian firm, it’s a no-nonsense, light and powerful Ford EcoBoost-derived powerplant that will hopefully provide a seamless transition from outgoing TOCA unit supplier Swindon.

“It’s been a relatively straightforward development phase for us,” says M-Sport head of engine development Nigel Arnfield. “It’s a base engine that we know well – we’ve used variants of it for probably 15 years now. So the variant that we’re using for the TOCA engine is the last iteration of that. The regulations are fairly

solid; there’s no real reason to throw great sums of money used in exotic materials or anything. You can do a competitive engine with just good solid engineering.”

Regarding M-Sport’s parallel work on the introduction of hybrid power to the World Rally Championship, Arnfield says there is “none whatsoever” when asked if there are any similarities between the architecture of the two engines. “I would have said that the hard work on the BTCC hybrid was done between Cosworth and Xtrac, because it’s mainly mounted on the box,” he continues. “There isn’t a great deal of interaction between the ICE and the electrics side to be honest. They pretty much can operate independently.”

Testing has gone well. “The durability phase has been exceptionally good,” enthuses Arnfield. “Our sign-off was to run an entire season on the dyno. We actually used laps of all of the circuits that were used in 2019, and we ran the equivalent of a complete season at every different venue. There were absolutely no issues from that. It included pitlane running, out-laps, in-laps, number of free practice, qualifying, race laps, all with heat-soak and cooldowns in between, so it was as representative as we could make it.” That came to around 3000 miles: “Once that was completed we did a further 3000 in the chassis with the same engine. It’s been exceptionally good, worryingly so!”

NASCAR'S RADICAL UPGRADE

It's not just Formula 1 that's set for upheaval in 2022, as the NASCAR Cup series adopts its Next Gen cars that cast any in-built advantages aside and call for a new way of operating

BY JIM UTTER

Finding speed has been the backbone of NASCAR Cup Series racing since its inception and will remain so with the introduction of the Next Gen car in 2022. What will change, in addition to the much-altered designs of the cars themselves, are the tools teams will employ to make their cars go faster.

The requirement to change these tools has arisen because much of the technology behind the cars is also in flux. That's welcome news for manufacturers, who have desperately wanted to see the technology in NASCAR racing have more relevance to production-model cars.

"It's old technology," said Ford Performance NASCAR programme engineer Richard Johns of the current 'Gen-6'-model Cup car at the revealing of Next Gen. "It's a solid rear axle with a big Ford nine-inch rear end. Truck-arm cars – they don't build them anymore. That's 1960s and '70s stuff."

The Next Gen car could also make NASCAR more appealing to prospective new manufacturers, particularly with a planned transition to hybrid technology. The new car, for now, will continue to use internal combustion, pushrod V8 engines produced by each of the three



Radical changes may entice new manufacturers to join

NASCAR

NASCAR



“We are taking the seat out of the current car and throwing the rest away”

current manufacturers — Chevrolet, Ford and Toyota.

Fans will almost immediately notice a change with the sleek new outward designs of the Chevrolet Camaro, Ford Mustang and Toyota Camry. The styling and composition of the new common Dallara-made chassis has allowed the cars to more closely replicate the identities of their showroom counterparts. The bodies of all three cars are symmetrical with lower greenhouses, shortened deck lids, and the car's width has grown.

Other prominent differences include far more stock-looking wheels and wheel well, body side moulding and character lines, hood design, and air exhaust vents built into the rear bumpers. But underneath the composite bodies can be found what many NASCAR veterans call a “revolution” in technology.

“This is definitely the biggest change I’ve ever gone through in my career in

racing and that includes going from dirt to asphalt — it’s bigger than that,” declares Team Penske NASCAR competition director Travis Geisler.

“When we went to what was known as the ‘Car of Tomorrow’ [phased from 2007, full-time by 2008] a lot of the suspension, a lot of things were still the same — it was just a different chassis and body. This is different everything.”

For instance, the largest teams in NASCAR currently design and manufacture a lot of the parts and components that go on the cars in-house — one of the reasons Cup racing has become so expensive over the years. But virtually all parts, including the chassis, of the Next Gen car will be bought by teams from NASCAR-approved suppliers.

“Now it’s about, ‘How do we get all this stuff that’s coming from different people and put it together the best we can?’” Geisler says. “Another important

dynamic — what will this process look like for our race shop?

“How do we assemble this thing and what will the workflow look like? It’s a lot different than starting from raw steel in the chassis shop and in the fab shop.”

WHAT’S SO DIFFERENT?

Among the biggest technology changes in the Next Gen car are many areas that long ago became standard in production vehicles. These include 18-inch forged aluminium wheels, independent rear suspension and rack-and-pinion steering, a transaxle that combines the transmission and rear gears into one package, sequential shifting, hood exits to assist with engine cooling, and a full underbody and rear diffuser to seal the bottom of the car.

“This isn’t just an evolution — we’re taking the seat out of the current car and throwing the rest away and we can’t minimise that,” says Toyota Racing ►



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president David Wilson.

As Chevrolet director of NASCAR programmes Eric Warren put it at the car's official presentation: "From an engineering standpoint, this is a seismic shift. It's a completely new car that brings with it a lot of opportunity from a technical standpoint."

Only one on-track test has been held with more than three cars thus far, so much remains for teams to learn, from what changes can and cannot be made to alter the car's performance to the impact of the new technology.

"I think the biggest thing is trying to find where you're going to make speed with this car," says Geisler. "Right now, we make speed from new parts and pieces, moving this, moving that — that's all going to be gone."

"It's so early in the process and it's the first time we've had a car that you can define all the set-up parameters for. The current car you can just go build something different and move it."

"Now, it's, 'Here are the shock settings, here are sets of springs that you have, here are the suspension points you can run — what's the best one?' There are a finite set of variables."

Among all the changes on the Next Gen car, Geisler believes one — the bottom of the car being sealed with full underbody and rear diffuser — has so far had the biggest effect on teams.

The key role of the diffuser on modern race cars is to accelerate the flow of air under the car, creating an area of low



"So much performance is going to come from aero and it's so important to get it right"

pressure, thus increasing downforce.

"Aerodynamic performance is what typically wins at a lot of these tracks," Geisler adds. "The aero performance that underbody makes is so different from what we are all used to racing with. Right now, we have a splitter and radiator pan in the front and that's kind of it. We've made other pieces into aero parts but that's it. There is so much performance that is going to come from aero and it's so important to get it right because everything else is basically going to be the same."

PLENTY OF WORK TO DO

Given the revolutionary changes on the Next Gen car and the precious-little track time teams have had with it, it's clear there will be a lot of 'learn as you go' moments throughout the 2022 season.

There are several multi-car tests

still to come, including on the Charlotte Roval next week, the Charlotte oval track in November, a December test at Phoenix, and an outing is tentatively planned in January at Daytona International Speedway.

The first 'real' competition with the new car will come on 6 February when upwards of 25 Next Gen cars will compete in the pre-season Clash exhibition race on a made-from-scratch quarter-mile asphalt track inside the Los Angeles Memorial Coliseum. Two weeks later, the 2022 Cup season will officially kick off with the Daytona 500.

"The reality is we're going to be working on this airplane while we're flying it," Wilson says. "We're going to be working on this car while we're racing it next year, that's to be expected. No one should be surprised. That's just what we're dealing with."

Penske's Geisler says that, in one respect, that's sort of been a cornerstone of NASCAR racing from its earliest days. "Honestly, anything we've ever run in NASCAR has involved ongoing development," he says. "We've never stopped developing the current car; we've never stopped evolving them. We've never stopped trying to make them faster."

"Certainly, there will be more development than we're used to. There's a lot to work on, a lot of issues to work out. But I don't think racing's ever been at a point where it's a destination sport — it's always been an ongoing process." ■



Toyota, Ford and Chevrolet Next Gen racers are revealed

HOW TO BE AN ACE ENGINEER

DIL simulation expert
Kia Cammaerts shares his
tips for a successful career

BY JAMES NEWBOLD

As he reflects on a diverse 30-year career that has taken in spells as a Formula 1 aerodynamicist, software engineer and creator of integrated driver-in-the-loop simulator systems used by General Motors and Ford for developing and validating vehicles, Kia Cammaerts self-effacingly describes his path as “the random walk of a drunk man in a toy shop”. The co-founder and technical director of advanced simulation company Ansible Motion professes to like all aspects of engineering, and regards his open-minded philosophy as a “good approach to recommend to anybody”.

“I don’t think I planned to do one thing or the other,” he says, “so as I’ve stumbled from one domain to the next, I’ve just tried to collect as much knowledge and keep my interest up as much as I can.”

Cammaerts’s motorsport journey began at sportscar constructor Tiga while still a student, before landing his first full-time job at Ralt as a design engineer on the RT33 Formula 3 car in 1988. Working under boss Ron Tauranac kept him on his toes and engaged in “thinking through what you’re doing on a value basis and also a value-performance basis”. When the company was bought out by March, he worked on the 89C Alfa Indycar and the windtunnel programme for its successor, working briefly with Lotus 72 designer Maurice Philippe. A true generalist, he was one of Cammaerts’s greatest influences, and inspired him to “deeply understand the engineering domain you happen to be in”.

F1 was a brief chapter in Cammaerts’s

career, spanning 1990–91 at a declining Team Lotus. He regards its “crumbling” Ketteringham Hall HQ as “possibly one of the most inappropriate places to locate an F1 team ever”, and recalls a Lamborghini engine falling off a trolley while being pushed across the cobbled stones that led to the engine shop. The tumble cracked the crankcase. “Not something that you’d find happening in a modern F1 team,” he says.

“Aero was starved of funds,” which made for endless compromises, but Cammaerts relished working with the “exceptional” Enrique Scalabroni during the Argentinian’s brief stint at Hethel and was particularly “inspired by his lack of fear and willingness to apply himself in almost any discipline”.

A spell as a freelance design engineer followed, in which Cammaerts drew the gearbox that propelled Larrousse’s Philippe Alliot to fifth in the 1993 San Marino Grand Prix. Work on TOM’S and Ikuzawa F1 projects failed to see the light of day.

Cammaerts found that in F1 it was “quite hard as an individual” to make a really deep

contribution”, even before its adoption of formalised processes that marked the transition towards F1 engineers becoming deep specialists in their respective fields.

Simulation, by contrast, does not suffer from this problem. Cammaerts’s first involvement was motivated by a desire to understand how aerodynamic forces impacted the car, but the “relatively primitive” data acquisition and analysis tools available meant “if you wanted to simulate something, you had to write the code yourself”. So that’s what he did.

Cammaerts left his job as a data acquisition and analysis software developer at TAG to focus on building simulation programme AeroLap, marketed by Ansible Design. And since 2009, Ansible Motion has focused on incorporating the human element, which he says “will occupy me for the foreseeable future” at its Norfolk base.

“There’s just so much engineering available,” he says, “so many problems to be solved and so many more things to optimise, just in my current domain.” ■



Cammaerts is the co-founder and technical director at Norfolk-based Ansible Motion

Spell as aerodynamicist at Lotus underlined limitations of individual input in F1



COLOMBO/MOTORSPORT IMAGES

TOP TIPS

FOR ENGINEERS FROM KIA CAMMAERTS

- Engineering is engineering and you can move from domain to domain. Terms change, but the actual concepts are the same. Transportable knowledge can break down artificial barriers.
- Keep a good view on how the money flows through an organisation. That’s the engine that provides you the means to do your engineering.
- If working with customers, understand what they want and try to keep improving yourself.



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